Université de Montréal

From the Pioneer to the Last Landscape
Disappearing Open Landscapes in Israel

par

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RÉSUMÉ

Le problème majeur présenté dans cette étude est la disparition progressive des espaces libres disponibles en Israël. En quelques décennies, Israël, un nouvel Etat peu peuplé, s'est transformé en l'un des Etats les plus densément habités de la planète. La progression de l'urbanisation soulève la crainte que l'espace d'Israël ne devienne dans les prochaines décennies qu'un tissu urbain continu, processus qui, inévitablement, transformera le pays en une seule grande ville aux dépends de toutes les surfaces agricoles et espaces ouverts qui séparent actuellement les villes.

Pendant le centenaire précédent, le paysage en Israël a subi de profonds changements, depuis l'idéologie sioniste, favorisant une terre agricole vers une communauté industrielle. Cela a entraîné de profondes modifications culturelles, sociales et économiques. En effet, le changement conceptuel des priorités de la population, associé à la demande accrue d'habitation, a contribué à la disparition des espaces libres.

Du point de vue de l'architecte paysagiste, l'amélioration et la préservation d'un paysage pionnier qui a subi une telle transition en quelques décennies nous oblige à poser plusieurs questions: Quels sont les outils nécessaires à la planification d'un processus qui causera la survie ou la disparition du paysage? En quoi l'approche dans la planification du paysage a changé en sachant que cela serait le dernier ? Quel sera le degré d'impact du paysagiste?

Ce travail a pour but d'examiner la chaîne des évènements, l'histoire, l'évolution de la planification, et les effets socioculturels qui ont amené à cette situation catastrophique, afin d'identifier les outils les plus performants qui pourraient arrêter la disparition des espaces ouverts qui existent encore en Israël.

Dans cette étude, j'ai tout d'abord abordé la réduction des espaces ouverts en Israël avec une vision macroscopique- par l'analyse des stratégies de planification à travers une perspective nationale- avec l'intention d'analyser les facteurs liés au paysage israélien. Dans un deuxième temps, j'utilise deux approches microscopiques. La première consiste en une étude de cas, celle du parc Ayalon qui constitue un des derniers espaces ouverts au cœur d'Israël, à la frontière entre la cité de Tel-Aviv et les villes de banlieue adjacentes. La deuxième est de discuter les principes fondant les stratégies des espaces ouverts pour recenser les outils disponibles pour l'architecte, et ce afin de transposer les plans décisionnels pour la création d'un paysage viable à l'échelle nationale.

Mots Clé: Espaces ouverts, Espace pionnié -Israël, frontière, urbanisme

SUMMARY

The root of the problem presented in this essay stems from the limited, and constantly diminishing open landscape resources in Israel. Within a few decades, Israel has been transformed from a sparsely settled and empty new state into one of the most crowded countries on earth. The fear is that the growth of urban systems will form a connected network of human settlement that, within a few decades, will extend all the way to Israel's southern border. Such an extension would turn the whole country into a single city-state, with agricultural land and open landscapes consumed within an urban continuum.

In the last century, the shape of the Israel's landscape has undergone vast changes- from the original Zionistic ideas of cultivating the land into a modern industrialized community. Both the shifting conceptual priorities of the population and the fast growing demand for housing have resulted in the disappearance of open landscapes.

From the viewpoint of the landscape architect, the rapid transition from a pioneer landscape to a modern industrial landscape leads to a number of crucial questions. In a long and continuous planning process, what are the critical design tools that will cause a landscape to survive or disappear? What has changed in the approach to landscape planning, knowing that it is the last landscape left in Israel? To what degree are we as planners willing and able to have an impact?

This work examines the chain of events, history, evolution of planning, and socio-cultural effects that have led to this catastrophic situation. It will attempt to propose critical tools that might conserve the remaining open spaces in Israel.

This study begins by picturing the situation of diminishing open spaces from a macro viewpoint—by analyzing the planning strategy in Israel through a perspective of national plans, and by aiming to investigate the planning factor as portrayed in the image of the Israeli landscape. Then, this study will address the smaller scale in two ways. First, it will address the selected case study of the Ayalon Park, which encompasses the last significant open space remaining in the heart of Israel (at the border of the largest urban continuum of Tel Aviv and its adjacent cities). Secondly this study will deal with the principles of open landscape strategies in order to understand what tools are available to the landscape architect for "translating" national scale planning decisions to theconservation and development of landscape.

Key words: Open Landscape, Pioneer Landscape – Israel, Boundary, Urbanization

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LIST OF ABBREVIATIONS

JNF	The Jewish National Fund
OLI	The open Landscape Institute
SPNI	The Society for the Protection of Nature in Israel
TAMA	National Master Plan.
TAMAM	Regional Master Plan

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My most personal debt is to my father, Yehuda Ginati, for the days and nights that he has spent in reviewing this work and for his fruitful criticism. It is to him that this mémoire is dedicated.

Michal Ginati-Turner
Montreal, May 2004.

Everything is maps. Even people and their fates.
And at everyone's feet a measuring scale
and an explanatory key: this is a good path,this is difficult.
this an ascent and this an abyss. This is a great love
and this deep disappointment.

Everything is open maps
of the divine architect.

What is the great mistake.
of the creation of the world:
planning the desert or planning settlements
for people, fields and forest and streams of water.

We'll never know.

-Yehuda Amichai-

הַכֹּל מַפּוֹת. גַּם בְּנֵי אָדָם וְגוֹרָלוֹתֵיהֶם.
וּקְנֵה מִדָּה לְרַגְלֵי כֹּל אֶחָד
וּפֵרוּשׁ הַסִּימָנִים: זוֹ דֶּרֶךְ טוֹבָה, זוֹ קָשָׁה.
זוֹ עֲלִיָּה וְזוֹ תְּהוֹם. זוֹ אַהֲבָה גְּדוֹלָה
וְזוֹ אַכְזָבָה עֲמֻקָּה.

הַכֹּל מַפּוֹת פְּרוּשׂוֹת שֶׁל
הָאַדְרִיכָל הָאֱלֹהִי.

מַהִי הַטָּעוּת הַגְּדוֹלָה
שֶׁל בְּרִיאַת הָעוֹלָם:
תִּכְנוּן הַמִּדְבָּר אוֹ תִּכְנוּן יִשּׁוּבֵי
בְּנֵי אָדָם, שָׂדוֹת וְיַעַר וְנַחֲלֵי מַיִם.

לְעוֹלָם לֹא נֵדַע

INTRODUCTION

Landscape may be defined as the convergence of endemic geographical characteristics and local human culture. It is a highly vulnerable and volatile system: the slightest breeze leaves an impression on it. Landscape can neither be framed nor frozen in time; its boundaries are open to both external and internal effects.

Israel has limited land resources and rapidly diminishing land reserves. Its minute size is demonstrated in **Figure 1.1**, which compares the area of Israel to that of Quebec. The central and most populated part of the country is narrower than the length of the island of Montreal. Further, as land reserves diminish, errors in landscape plans become increasingly irreversible.

This study addresses the Israeli landscape and what will become of it. The landscape pattern of any country is the product of the interaction between nature and human culture and history. Planning the landscape pattern of a homeland involves an appeal to subjective memory. The dream and utopia of one period may become the "nightmare" of a later era.

The shape of the Israeli landscape has been subject to vast changes in the last century. The original Zionist ideal that envisioned an agrarian-based society has been altered to suit the needs of a modern industrialized community. The changing conceptual priorities of the people, together with the rapidly growing demand for housing, has resulted in disappearing open landscapes.

The first planners at the time of the establishment of the State of Israel dreamed of a landscape pattern similar to the homeland they left behind. The landscape of the homeland that they wished to create was linked to dreams of "fertilizing the wasteland", of establishing an land shaded in natural greens and yellows.

What, then, is the contemporary landscape pattern of the homeland that we wish to establish now and for the future? What is lacking? What are the opportunities that are still available?

As landscape planners, we have the privilege of devising landscape patterns, but we also carry the responsibility of avoiding irreversible destruction. Landscape preservation is

a cultural concern that should not be confused with the environmental issue it supports and that is supported by it.[1] Much of what we find interesting and beautiful about the cultural landscape lies in what is sometimes referred to as its vernacular component.[2] The vernacular aspect of a region is usually (though erroneously) perceived as belonging exclusively to the pre-industrial era when technology was more limited and nature, more dominant. But as Kevin Lynch has observed, the attraction of vernacular places was "*usually the consequence of slow development, which occurred within sharp constraints of natural condition and cultural limitation and since then have been enriched by continuous habitation and reformation*". [3] The vernacular landscape, then, is not only a question of its indigenous nature, but also of its continuing evolution as a place that serves the ever-changing needs of the humans that live in it.

In countries where the cultural landscape has evolved over thousands of years, the landscape of authority has been part of a long pattern of biological and social change, involving landscape reconstruction. The vernacular, both past and present, has usually worked within a variety of frameworks that are imposed by either authority or nature, or both. And the framework imposed by authority usually has little regard for, and is generally unaware of, natural processes.

Aesthetic values, for the most part, have little to do with the creation of vernacular landscapes. Their perceived beauty is the consequence of the practical needs to solve the problems of habitat and daily living. In other words, beauty is the result of the available technology as it limits and shapes the need to adapt to the land. The visual character of pre-industrial landscape was shaped by necessity. There was no alternative but to accept the limitations imposed by nature, culture, and technology. The difference between one place and another, the sense of belonging, or being rooted to a particular location as opposed to another, has traditionally been achieved because of the limited alternatives

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[1] Jacobs, Peter. *The activities of the open Landscape institute in Israel 1998-2003* .Report to Yad Hanadive Jerusalem, Israel, 2003.

[2] Hough, Michael. *Out of the place, restoring identify to the regional landscape*. New *Haven &London* :Yale University Press , *1990.1-5,179-213* .

[3] Lynch, Kevin. *Managing the Sense of a Region*. Cambridge: The MIT Press, 1977. And Hough, *Out of... 1990.34.*

available. The overall form of vernacular settlement was determined by the constraints of the land and climate and by the social and historical forces that were unique to each time and place. The apparent shift away from what is distinctive to what is similar in the contemporary landscape is the consequence of the complex social, economic, and technological changes that have occurred with increasing rapidity since the industrial revolution.

The fast changing face of virtual, cultural, and economic landscape in Israel scarcely left any time for either organic evolutions or for the reevaluation of planning decisions. As Gideon Sarig, a leading Israeli landscape architect, has phrased it, "*We are a country that has no time for time, the future is so close*".[4]

At the turn of the seventies a book called "*The Last Landscape*" was written in America by an author named William Whyte in which the proposes a new concept of national or regional landscape planning instead of local planning. In the summary of his book, White stresses the following:

"Open space can help people perceive the structure; open space cannot reshape it... the structure is already set. The topography and the transportation lines are what give structure to the region, and they were laid down a long time ago... they cannot really be changed... most of the big tracts in our metropolitan areas have already been saved, or they already been lost .the most pressing need now is to weave together a host of seemingly disparate elements... if these elements can be linked, each will gain a much greater access, and the sum can make a very effective whole... ***we must make our commitments now and look to this landscape as the last one. For us, it will be.*** " [5]Understanding open space as the "last landscape" is the key to the metaphors, scenarios, and terms used in the recent Master Plans in Israel.

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[4] Helphand, Kenneth. *Dreaming Gardens, landscape architect and the making of modern Israel.* The center for American Places Santa Fe, New Mexico, and Harrisonburg, Virginia in association with the University of Virginia Press, Charlottesville, 2002. 135 .

[5] Whyte, William. *The last landscape.* Tony Hiss. Pennsylvania: University of Pennsylvania Press Philadelphia, 2002. 354.

This thesis investigates the evolution of Israel's landscape and try to explain the change in state of mind towards the **last open spaces** in an effort to understand:

1. How it had resulted in a change of definitions and tools that were devised to form and protect the "last landscape"?
2. What are the influences of israel's landscape changes on the country's ecology and, even more so, on its culture.

The goal of such a study is to isolate and refine the tools available to the landscape architect that have the potential to arrest the decline of the Israeli landscape.

These questions will be addressed in three ways:

1. By analyzing Israel's national plans, how they changed, and how these changes shaped our idea of the Israeli landscape.
2. By examining a case study of Ayalon Park, the last significant open space remaining in the heart of Israel at the border of the country's largest urbanized region- including Tel Aviv and its adjacent cities.
3. By dealing with different principles of open landscape strategies to understand what tools are available to the landscape architect to bridge the gap between the country's national plans and plans for creating a better local and regional landscapes.

These three components guide the following questions surrounding territory of Israel. Of what is it composed, and what is the extent of its stability? Can the illusion of space be created in an ever-expanding urban industrial? To what degree are we as planners willing and able to have an impact on the landscape structure of the country? What tools do we have at our disposal to preserve the utopian vision of the Israeli landscape, and to continue to shape its vernacular forms and meanings?

Fig 1.1:the map of Israel superimposed on the map of Quebec. The entire length of Israel is approximately the distance from Ottawa to Quebec City.

CHAPTER I
The Israeli Landscape in the Context of National Master Plans.

" *What artist so noble...as he who, with far-reaching conception of beauty, in designing power, sketches the outlines, writes the colors, and directs the shadows of a picture so great that Nature shall be employed upon it for generations, before the work he arranged for her shall realize his intentions*". Frederick Law Olmsted.[5]

This chapter investigates the **planning factors** in Israel leading to the unbalanced distribution of developed and open areas. The assumption being that a long-range planning tool is crucial for maintaining the balance required to support any cogent idea of an Israeli landscape.

The main question addressed by a review of these plans is the following: what changed in the context of national planning as the early planners (who were confronted with a raw, sparsely populated land) gave way to the contemporary planners (who had to cope with an interrupted, non continuous "final" landscape)? How did this change impose itself on the concepts that guided the national planning of different periods? How did it effect the issues surrounding landscape concepts? What techniques are involved in the shaping of the future face of the country? And what available planning tools are left for us as planners?

In what follows, I will review the background of each of the four national plans, and explain the principle goal each one was designed to achieve[6]:

1. **National Master Plan, Sharon-1952.**
2. **National Master Plan 31 –1992.**
3. **Israel 2020 , Master Plan for Israel in the 21st century- 1996.**
4. **National Master Plan 35-2003.**

[5] Parker ,Christopher Glynn. *Frederick Law Olmsted Founder of American Landscape Architecture,His life and work* < http://yosemite.ca.us/go.php?www.newbedford.com/olmsted.html>, 1999.

[6] Only the first two of the four plans were approved statutorily; the third one was not actually meant to be approved but was rather a planning directive concept, and the fourth is still undergoing the approval process.

For the purposes of the present work, I have grouped these four plans into two chapters:

1. "**Planning the Pioneer Landscape**" dominated by the 1952 Sharon Plan.
2. "**Planning the Last Landscape":** dominated by the other three plans, that had started with "plan 31", following the 1990s.

The two planning periods were marked by different historical events, as well as different planning concepts and planning targets. These differences resulted in altered understandings of what there was to be preserved, created, and rehabilitated.

1.1 *The reality of Israel 2003*

About 800 new settlements have been built in the 55 years of the State of Israel's existence. About 15 new Jewish settlements on average are set up each year in Israel. No figures are available regarding the number of illegal settlements that sprout up each year.

The "Green Line", a virtual delineation which marked the borderline between Israeli and Arab territory in the years 1948-1967, **(Fig 1.1.1)** , was deleted from official maps after the 1967 War (in which Israel had defined the Jordanian rule of the west bank territories). The Green Line is a psychological demarcation that divides "home" on one side from "chaos" and "barbarity" on the other side.[7]

Fig 1.1.1:
The "green Line" between Israel and Arab territory.

The law pertaining to the construction of cities does not apply to the area beyond the "Green Line". In other words, none of the national master plans include the territories beyond this virtual line. At present there are 400,000 Israelis and 1.5M Palestinian Arabs living east of this line.

Israel has become the most densely populated nation in the western world, containing about 500 individuals per square kilometer. By the year 2020, the density in Israel is

[7] Gutman, Yehoshua and Bercovitch Rinat. "An Israeli Lexicon of space", in *Borderlinedisorder*. Zvi Efrat, the Israeli pavilion, The 8th International Architecture Exhibition, La Biennale de Venezia, 2002. 48-51.

expected to reach 850 individuals per square kilometer – 2.5 times that of Japan and Holland. [8] (which are considered to be densely populated countries)

Open spaces constitute approximately 94% (20,361Square KM) of Israel's overall dry land. Built-up areas constitute approximately 6% (1,310 Square KM). Since the Negev desert makes up almost 66% of the overall dry land (**Figure 1.1.2**) and only 2% of it is developed **(Figure 1.2.1)**, it has an impact on the countrywide ratio of developed areas. Without the Negev, the overall developed area amounts to about 13.8% of the total dry land surface.

Open spaces include agricultural land, nature reserves and national parks, forests of various kinds, as well as "other open spaces". Most of the "other" open spaces are areas defined in National Master Plan 31 as "nature resources area", and the majority of them are virgin land of different types.

Figure 1.1.2: Israel Topography Map.

(Source: Secardoti Annie, Israël. Espace de reve.Paris: Gründ, 1999.13.)

Extensive sections of the Negev's "other" open spaces, *de facto*, serve the military as practice and drill areas.

[8] Gutman , *An Israeli Lexicon*...,(2002),49.

The geographic distribution of open spaces and developed areas reveals a marked gap between the ratio of built-up areas in the Tel Aviv district (68.2%) to the southern district (2%). Despite this fact , the ratios of open spaces across the country range from 98% in the southern district to 31.8% in the Tel Aviv district, while the nationwide ratio is still high (94.0%). Notwithstanding these figures, there is a perceived lack of open spaces and one of the main reasons for this deficiency is the lack of spatial continuity that arises from their ongoing erosion.[9]

Fig 1.1.3: Israel 2003,the center and north of the country are crowded and full, while the southern district is empty.

(Source: Mazor, Adam. *Long range planning to Israel-rational and method*, preface. Israel 2020 Master Plan for Israel in the 21st century, Technion-Israel Institute of Technology,Faculty of Architecture and Town Planning, , 1997 .12)

1.2 The problem statement

The changing economic, social, and ideological interests marking the development of Israel have left environmental concerns as a low priority, a factor that has shaped the landscape of the country, in many ways, some of which are irreversible.

Within a few decades, Israel had been transformed from an empty new state into one of the most crowded countries on earth. (**Figure 1.2.1**) The frequent upheavals that marked this period, the transitions from war to peace, and from territorial expansion to retreat have resulted in constant changes to the face of the country.

The root of the problem addressed in this essay, stems from the limited extent of land in Israel relative to urban /industrial demand for growth. The fear is that the constant process of creating urban systems through a series of adjacent and connected cities will

[9] Lerman Architects, Sadan, svivot tichnun. *Policy and tool for the preservation of open spaces, background for policy definition*. preliminary report no 1, The open landscape institute(0LI) the society for the protection of nature in Israel(SPNI), April 2002. (Hebrew)

lead, within a few decades, to the extension toward Israel's southern border. The end result of such a process may be that the whole country will turn into a single city-state as Israeli cities gradually consume agricultural and open landscapes in favor of an urban continuum.

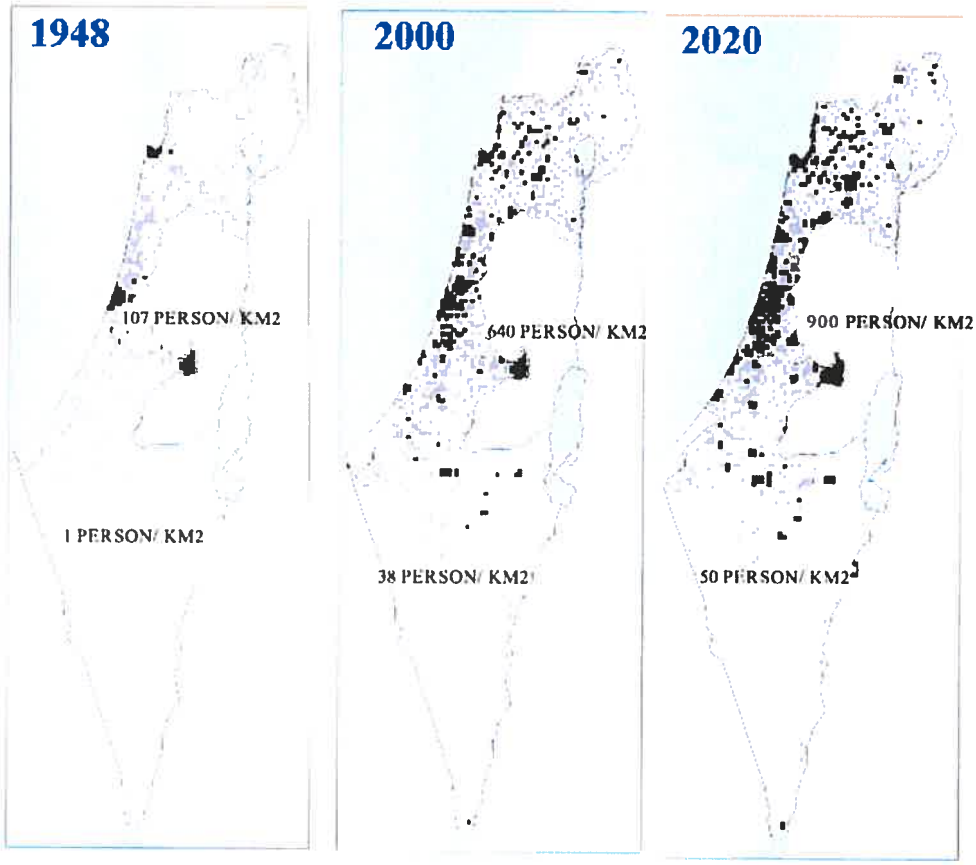

Figure 1.2.1:
Density of population in the south and in the center of Israel. 1948-2020.

(Source: Mazor, Adam. *Long range planning to Israel-rational and method*, preface. Israel 2020 Master Plan for Israel in the 21st century, Technion-Israel Institute of Technology,Faculty of Architecture and Town Planning, Samuel Neaman Institute for Advanced Studies in Science and Technology, 1997 .)

The dilemma of the country's size not being able to contain the millions destined to inhabit the Jewish State was foreseen early in the 20th century by the British Mandate rulers of the time[10].

During the early years of independence, a population dispersion policy motivated by political and security needs led to the establishment of many and relatively small settlements charged with securing a grip on the land. These villages, communal settlements, and small towns, scattered all over the northern half of Israel, necessitated the construction of a dense web of roads, highways, and power lines cutting through, and impairing, the continuity of open spaces. This, in turn, created an environment of industrial production, and a loss of cultural identity among the people.

In essence, there are two central issues that shaped the evolution of Israel's landscape, and that might eventually lead to its uncontrolled collapse:

1.The factors that are invariable[11]:

- The small size of the country **(figure 1.1)**
- The enormous population growth caused by the repatriation act; whereby every Jew throughout the world can claim Israeli citizenship and immigration subsidies.

2. The factors that are variable:

- The speedy growth of urbanization at the expense of agricultural and open landscapes, fostering an urban continuum.
- The traditional culture of land-use, which has been highly wasteful given the form of its dispersed settlement and infrastructure development. Agricultural land, supposedly protected by the first amendment to the planning construction law, has lost its special status, and much of it has been freed for building.

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[10] Mazor Adam , *The Vision of the Future The Spatial Organization Plan for Israel.* Israel 2020 Master Plan for Israel in the 21st century.Technion-Israel Institute of Technology,Faculty of Architecture and Town Planning, Samuel Neaman Institute for Advanced Studies in Science and Technology,1997. (Hebrew)

[11] The Open Landscape institute (OLI). Self *evaluation report*, November 2003. (Hebrew)

- Consumption of open spaces and the low environmental awareness of Israel's elected decision makers and their constituencies.
- Strong trends toward the "privatization"[12] of national land reserves due to real-estate pressures that grow as a result of the increasing demand for residence space and the "big money" earned by the developers of such areas.

From the landscape architect's viewpoint, the transition over a very few decades from a pioneer landscape to shaping and preserving the last landscape leads to a number of questions; What are the critical design tools in a long and continuous planning process which cause a landscape to survive or to be destroyed? What has changed in the approach to landscape planning, knowing that it is the last one? What are the tools which can help us, to preserve its character, its vernacular expressure, and thus preserve local culture in a disappearing landscape.

Fig 1.3:*Within a few decades Israel had been transformed from an empty new state into one of the most crowded countries on earth.*

[12] Jacobs, Peter. *The activities of the open landscape institute in Israel 1998-2003* .Report to Yad Hanadive Jerusalem, Israel, 2003.

1.3 Background- the first years.

Since the establishment of Israel in 1948, the need for long-range comprehensive national planning was obvious because of its limited space, its substantial waves of immigration, its pursuit of high technological standards, and its objective of attaining an economic well-being equal to that of developed western countries. Over the years, the rationale for long-range planning changed, and, at certain periods, even disappeared altogether from the public conscience. Understanding the background of Israel's first long-range plan is crucial to an understanding of the present construction and settlement distribution in Israel and its landscape evolution. From a historical and philosophical viewpoint, it can be claimed that Zionism, the movement that eventually led to Israel's independence, boasted "modern" and "super modern" aspects, although its basic ancient roots, are conservative by nature.[13]

Zionism, being a movement with a declared objective to return an exiled nation to a "normal" status, has had to move back to the basics which old and established nations naturally experience. The following basic difficulties had to be overcome:

- Returning to an old country, which was basically abandoned 1500 years ago.
- Reviving an old language that had not been in daily usage for close to two thousand years.
- Turning to rural settling, when, 40 years earlier, the world's leading trend had been to shift from agriculture to industry and from villages to cities.

For ideological reasons, Zionism's basic perspective was rural in nature, adhering to a basic vision of a largely agriculturally minded people who would form a well-rooted and "normal" nation. Thus, the goal was to turn about 50% of the immigrating Jews (normally town people) into agriculturalists. All of the efforts and almost all of the resources were geared toward this goal, namely that of agricultural settlement.

[13] Brozkus, Eliezer. "The evolution of planning idea in Israel." *Town and region*,18 (1987).(Hebrew)

The ideological interest in urban settlement among the Jewish sector was minimal, although in purely numerical terms, they turned out to be the majority. On the other hand, from an economic point of view, the flow of resources was primarily directed toward urban development—namely, the building of residential areas and industrial zones.[14]

The State of Israel and its planning institutions were established against a background where the structure of the settlement and population distribution were **polar** in nature. On the one hand, the spontaneous development of large cities is typical to countries (such as Argentina and Australia), which have had to absorb large waves of (in this case, European) immigrants. On the other hand, the originally planned rural cell, which did emerge, came about with hardly any interim links.[14]

1.4 planning the pioneer landscape: 'Sharon' National Master plan-1952

"Three dimensions make planning in Israel unique: the country, the people and time... The country: a country with a diverse landscape in a small area, which forms a bridge between three parts of the universe (Asia/Europe/Africa)*... The people: a people with a rich cultural and social fabric... Time: as a factor prodding and demanding of the country to keep up with an accelerated rate of development...* ""[15]

Comprehensive national planning began in Israel with high international standards. Although the plan was not statutory for many years (until 1965, when the planning and building law was legislated), the directives inherent to the plan guided and shaped the map of Israel one or two generations afterward.[16]

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[14] Brozkus, *The evolution...,(1987).*

[15] Sharon, Arieh. Introduction. In *Planning in Israel*. Sharon. The Governmental printer, 1952.5.(Hebrew)

[16] Shahar, Arieh. "protection on Agriculture Land." *Karka, The Land Policy and Land Use Research Institute*, 55 (September 2002).

A comprehensive planning process began immediately upon the establishment of the State of Israel (1948) by a team in which 180 professionals from among the State's senior architects and planners took part, and were headed by architect Arie Sharon. This long-range plan had since influenced the State of Israel's character more than any other plan. The planning process had to cope with national challenges such as:

1. Absorption of mass immigration
2. Establishing from scratch all establishments normally required for running an independent state.
3. Creating a new economic and social infrastructure under the constant threat of hostility from neighboring countries, a factor that led to a heavy consumption of resources for defense purposes.

1.4.1 Basic Principles:

Before its establishment, Israel was a poorly populated, "empty and sparse"[1] country (**Figure 1.2.1**), which had to consolidate its existence and security through regional policy. The Israeli planning doctrine, therefore, was founded on the following three basic principles:

1. **Nationwide** policy: a tool for fulfilling social, political, and security objectives.
2. **National values**: vital for gaining land rights in a constant situation of ethnic competition over settlement rights.
3. **Development and innovation are sacred:** the planning concept that was at the heart of national planning in Israel was "agoraphobic"—in the sense that empty spaces were perceived as a symbol of the failure of the original Zionist dream of reclamation.

Fig 1.4:
Basic principles
The Sharon Plan.

These basic principles had reflected at the physical planning, by the following concepts:

- **"Scattered" is preferable to "concentrated":** the more scattered the settlements, the more powerful the constitutional and state control.
- **"Many smalls" are preferable to "one big"** as a means of maximizing territorial coverage.
- **"New" is preferable to "old":** prioritizing the establishment of new settlements rather than enlarging old ones. (being and easier to demonstrate new values).
- **"Public" is preferable to "private":** public interests are always prioritized over the interests of small groups.

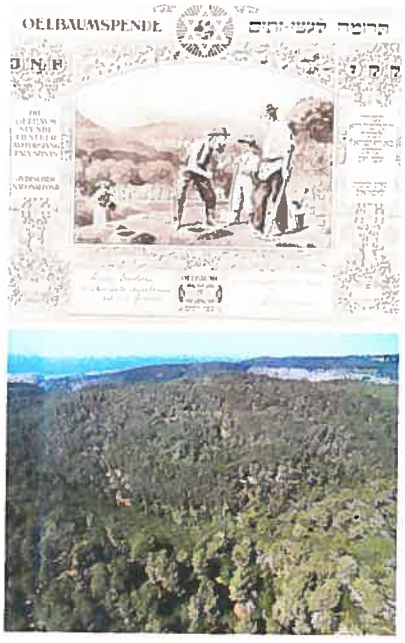

Figure 1.5: At the top, asking for donations JNF. At the beginning of the 20th century, the Israeli landscape was pictured as being filled with olive groves. In practice, the pine tree was used as a substitute for the native "slow" trees such as the olive or oak. The Israeli landscape changed over a few decades to a pine forest from north to south.

(Source: Secardoti Annie, *Israël. Espace de reve.Paris: Gründ, 1999.43.)*

1.4.2 Landscape design:

When the first Zionists disembarked on the shores of the holy land, they found, as Ben-Gurion[16] put it, a "shameful bareness"[17], or as Sharon phrased it, "empty slopes"[18].

The forested landscapes of Europe, together with the utopian vision of the promised land as "a land flowing with milk and honey" stood in stark contrast to the middle –eastern reality: a neglected, bare, and harsh wilderness. The devastating disappointment of the

[16] The founder and the newly elected (as well as the very first) Prime Minister of Israel.

[17] Barnir, Sigal. "On forests an commemorative Sites". In *Borderlinedisorder* the Israeli pavilion. Zvi Efrat. The International Architecture Exhibition, La Biennale de Venezia, , 2002. 55-57.

[18] Sharon, Arieh. *Planning in Israel*. The Governmental printer, 1952. 68.(hebrew).and see Fig 1.7.

early settlers motivated them to undertake an urgent "reclamation" of the land of their ancestors.

The uniqueness of the Sharon Plan lay in its aim to **"shape the country's landscape"** as fast as possible rather than "preserve" or "rescue" it. The concept of reshaping the country while "conquering its wilderness" and restoring the biblical image of "green land" had also given new importance to open spaces adjacent to urban areas.

The new attention to open spaces found expression in the following three type of planning policy:

1. The launching of survey of existing botanically, zoologically, and historically valued sites upon which to base the spread and placement of national parks. It is interesting to note that the policy set for spreading these sites all over the country did not, by any means, put a paramount priority on these land reserves. Instead, the result was a directive that placed a priority on the placement of parks and recreation zones in areas unsuitable or undesirable for human settlement. Terrains thus classified, for example, were sandy and rocky areas, assessed as being of "low construction value"[19]

2. Forested areas had historically carried a strong symbolic value in Zionism. The ideological vision of the holy land and its development that had driven the early stages of Zionist settlement changed over time. Land acquisition, the planting of forests, and the settling of pioneers were initiated by the first organization

Figure 1.6:
Jerusalem Mountain.
"Considerable mountainous areas in the outskirts of Jerusalem are currently bare rocks with mere traces of the previous stairs. The role of the many new settlements in this region is to preserve the land's fertility by repairing the stairs and extensive afforestation action. The afforested hills will also serve as a suitable backdrop for recreation and tourism enterprises."
(From the Sharon Plan)

(Source: Sharon, Arieh. *Planning in Israel*. The Governmental printer, 1952.x.)

[19] Sharon , *Planning...*, (1952),10.

established for land development, The Jewish National Fund – JNF.

The JNF was founded at the end of the 19th century and was subsequently authorized by the fifth Zionists congress. This organization largely shaped the borders of the Israeli state upon gaining independence in 1948 and for several years thereafter.

The head of the land development administration at the JNF, Josef Weitz, records in his diary a conversation he held in 1948 with Ben-Gurion, the founder and the newly elected (as well as the very first) Prime Minister of Israel. Talking about forest planting, he urged Weitz to increase by a hundred-fold the planned scope of tree planting from 1 million to 100 million trees per annum. *"Now, once our war for independence has come to its end, all efforts should be directed toward conquering the bareness of our country, which new planted forests will achieve like nothing else can"*. Continuing in this line, Ben-Gurion, in a speech held a few years later (on the 60th anniversary of the JNF), said the following: "*The JNF, in its actions, has set an example for our generation . . . for not being content with the preservation of the existing, and for remaining committed to the vision of turning a largely empty and unsettled land into a settled and populated one... "*[20]

Part and parcel of its strategy to realizing the central role of the JNF ideology was tree planting, which played a fundamental part in the post-independence Zionist narrative. During the years preceding the independence of the Jewish state, the Zionist ethos of holy land redemption took mainly the form of buying off concentrations of land from its Ottoman owners in Turkey and Lebanon, and transferring them to Jewish hands. This process of land redemption lost its importance once Jewish settlement rights were secured by the War of Independence and its establishment of sovereign borders for the new state. Following these events, the wilderness redemption and settlement ethos turned toward forest planting projects. "*From here on, the tree will be our token and symbol for ownership*" claimed Ben Gurion (It's interesting to note that in aerial photographs taken a few years later, and since, an evident green look distinguishes Israel from its surroundings).

[20] Keren Kayemeth Leisrael, Jewish National Fund. <http://www.kkl.org.il/kkl100/story/index.shtml>.

The technical means for achieving the coverage of empty and neglected terrain, and of transforming it into familiar European-like countryside scenery necessitated choosing botanic elements that provide a fast evergreen growth. Pine trees, chosen for the task, had already covered wide areas of northern and central hillsides like the Jerusalem Corridor at the time Sharon completed his plan. These monotype pine groves ("local forests"), densely planted, in many cases obstructed the characteristics of the natural panorama, and in other cases did not allow for the proper functioning of recreation sites such as parks and camping areas.

3. Sharon's third, and perhaps his most actively pursued, policy was driven by the popular concept of the country's development. A popular song verse of those days, referring to the restoration of the beloved country, is telling: "we shall cover you with a dress made out of concrete and mortar". This policy was the source of the wasteful spreading of settlements and of the greed for roads in the first plan.

To sum up, the landscape directive, as presented in this plan, was very fluid, and local area planners were free to adjust their planning to the "milk and honey" green land concept. Furthermore, there are no references made to the limited reserves of open spaces that were to become, in just a few decades, the main issue in Israel. The irreversibility of filled-in open spaces had diminished them for the foreseeable future. An indiscriminate covering of every available open space with planted trees to fulfill an ideological conception had created a uniform open space landscape that resulted in the loss of the unique character of many regions.

1.4.3 The organization of national space:

The basic question underlying an analysis of the preparation of the national master plan is the following: which point of departure will take priority in the organization of national space – open spaces or built-up areas? The answer to this question lies in two key factors. The first is the ideology and the policy at the core of the decisions leading to the layout and the ratio between built-up areas and open spaces. The second is the land reserve; the more the land reserve dwindles, the more crucial it becomes to preserve open spaces. Thus,

questions of ideology and land reserve are the factors that influence the construction policy.[21]

As described above, at the time the plan was drafted, Israel had abundant land reserves as well as an ideology and strategy based on Zionist conceptions of settlement and development. These conceptions were premised on notions of "sprawl" and "dispersal", and, therefore, the avoidance of dominant urban centers and monumental objects. Ideologically, Zionism affiliated itself with the international garden-city movement, fostering agrarian, anti-urban, and anti-bourgeois utopianism. At the center of this movement, stood the productive, land-laboring "new Jew." Strategically, concentration and crowding were perceived as exilic, anti-pioneering trends that could result in the loss of the land. Categorically, the plan approach preferred horizontal, sparse, low-to-the-ground construction. This master plan outlined the establishment of hundreds of rural communities and 29 new regional centers in an attempt to avoid overcrowding and to moderate the development of "huge overcrowded metropolises". Needless to say, this plan also included an objection to (1) vertical construction, (2) concentration, and (3) crowding. The three master plans that were to follow, however, found a basis in these three, originally rejected, principles.[22]

1.4.4 Planning language:

Uniformity of Planning Language: Centralized, detailed, unambiguous directives, and flawless planning are a must to a country of limited land reserves and poor resources. What's more, unlike countries endowed with rich resources, Israel cannot introduce substitutes and workarounds when an error in planning or a *breach of planning occurs*[23].

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[21] Elhyani, Zvi. "Oscar Niemeyer and Israel's Height Dilemma", In *Borderlinedisorder* . Zvi Efrat . the Israeli pavilion, The International Architecture Exhibition, La Biennale de Venezia, , 2002. 52-54.

[22] Kaplan, Moti and Dayan Oren. *The open landscape system.* Introduction, part 1. Israel 2020 Master Plan for Israel in the 21st century, Technion-Israel Institute of Technology,Faculty of Architecture and Town Planning, Samuel Neaman Institute for Advanced Studies in Science and Technology, 1977. (Hebrew)

[23] Sharon , *Planning...*, (1952),9.

In Israel's case, every development activity within the overall master plan, at the level of planning as well as at the level of actualization becomes critical. This is the main reason that the planning language used in this master plan is characterized by full coverage of every possible aspect, going into specific details not usually encountered in country or regional plans in other countries. In other words, the situation in Israel necessitates the use of regionally specific directive languages that are different for each space under consideration. However, the parts of this plan referring to the use of open spaces (mainly with regard to the planting of vegetation and to limitations on the erection of permanent structures) do use a uniform language. Indeed, instances can be found where uniform language used to impose principles of "garden cities" and population dispersal resulted in an undesirable, non-synchronized, and empty environment in the south of the country.

1.4.5 Graphic expressions:

Through an examination of the decisions made by the planners, and the terms they used, like "city gardens", "green belts", and "national parks", the influences of global ideas common to that period are evident. Yet, the situation under which this plan was drafted and evolved was unique to Israel and, most probably, unprecedented globally.

This uniqueness found graphic expressions in the plan charts at first glance, even before we analyze its critical issues.

Looking at the schematic spread of built up areas at the period preceding the establishment of the state **(figure 1.7)**, an evident impression of "Empty Country" is obtained, with islands of small, clustered, built up areas (many of them Arab villages) "lost" in vast open spaces.

The graphic expression of the right hand map**(figure 1.7)** illustrates the planners' subjective differentiation between "empty" spaces and "green" areas destined for preservation, as national parks. This approach was motivated by the general ideological urge to "fill-in" the empty spaces rather than keep them as potential reserves for the future. Although at face value, this was in opposition to the global trend that had strongly rejected the bad influence that industrialization and city-deployment had had on the environment,

the planners' approach did not entirely ignore the environmental issues; it just prioritized other, more pressing, issues.

This led to a situation where unwelcome environmental consequences impacted those areas marked as "empty" despite the advanced, future development forecasting tools that were employed by the planners. On the other hand, as can be seen from recent maps, the areas

initially zoned as green space were almost entirely preserved, and withstood the enormous pressures coming from developers and market demands for housing.

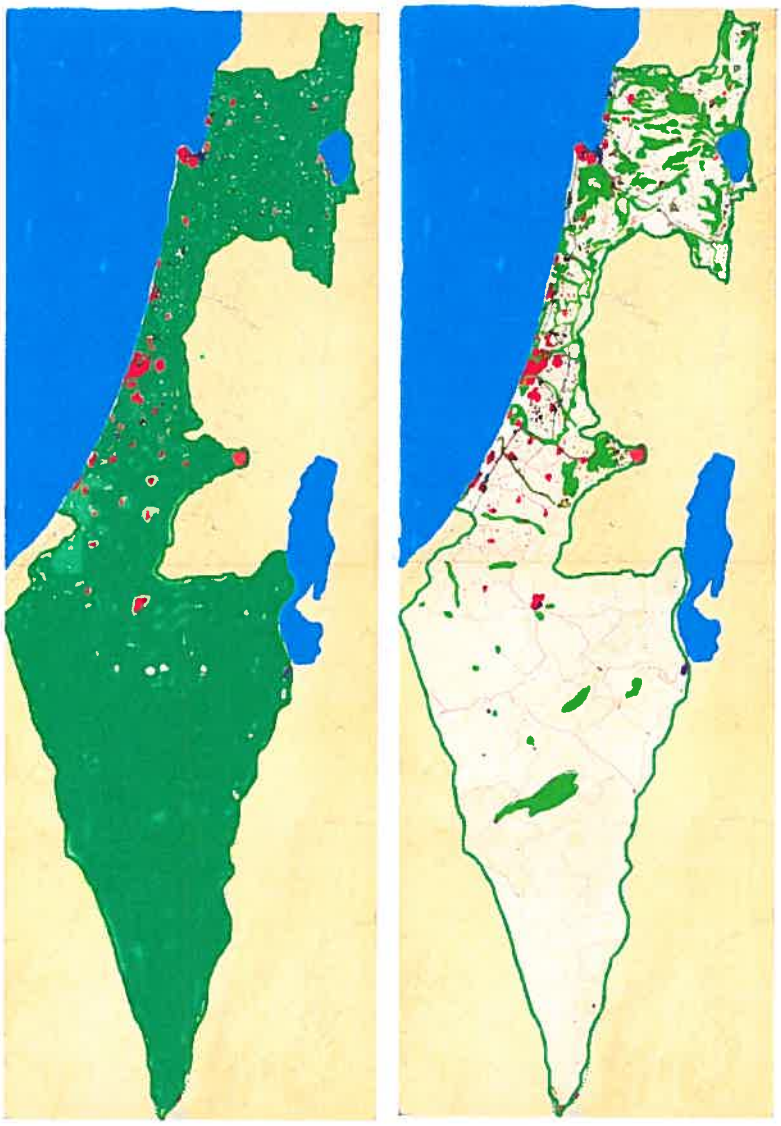

Figure 1.7 :These maps consist of a schematic layout of the Sharon's plan, both for developed areas as well as for open spaces. This will refer to basic objective usage-class definitions, to be compared with the outcome of a subjective standpoint of the planner. In the left side map an evident impression of "Empty Country" is obtained, where islands of small clustered developed areas, many of them Arab villages,are "lost" in a majority of open space, is evident.
The right hand side map's graphic expression relates to planners subjective differentiation between "empty" spaces and "green" areas destined for preservation, as national parks.

1.4.6 Boundaries:

Boundary issues are an integral part of urban planning. City limits, which - in the distant past - were a question of survival, have undergone extensive conceptual changes throughout history. City bounds are not frozen perpetually, they must be adjusted as the settlement grows or shrinks through time.

Diminishing open spaces, or their changing characteristics, are reflections of conceptual, dimensional and marking methods, of changes the boundary had undergone during the years. In a country with a space shortage like Israel, the "landscape traces" of the way "boundaries are bound" will heavily affect the destiny of its landscape.

On the drawing board, this plan was different from the other master plans that followed, because it did not have to cope with either previous planning mistakes or with the problematic processes of mass immigration and other political, economic, and social complexities that were to accumulate with time.

This situation had permitted the flexible use of two different reference boundaries.

A. The first one **divided Israel into twenty-four planning districts.**[24] The natural boundaries of each planning district were marked with a blue line **(figure 1.8)**. Each district constitutes an economically independent planning region whose center features the city consisting of the district's administrative, cultural and economic institutions.

The boundaries of each planning district, as drafted in the plan, are an attempt to establish statutory, administrative boundaries based on the region's natural topography. This approach is compatible with the approach that incorporates environmental values and outlooks in its perception of the city as a part of its environment. Biologist and city planner, Patrick Geddes, once noted that "*Civics as an art has to do not with imagining an impossible no-place where all is well, but making the most and the best of each and every place, especially in the city in which we live.*"[25] At the time the plan was drafted and implemented, ecological approaches and outlooks were still only in their initial stages. But

[24] A planning district is a geographical area with boundaries set according to geographic (drainage basins) and historical data ,taking into account existing land distribution and traffic arteries.

[25] Boardman ,Philip, *the worlds of Patrick Geddes*. London 1978

the concept of the city located within an environment and identified as a geographical unit still generates a certain logic that creates a balance between nature and the city.

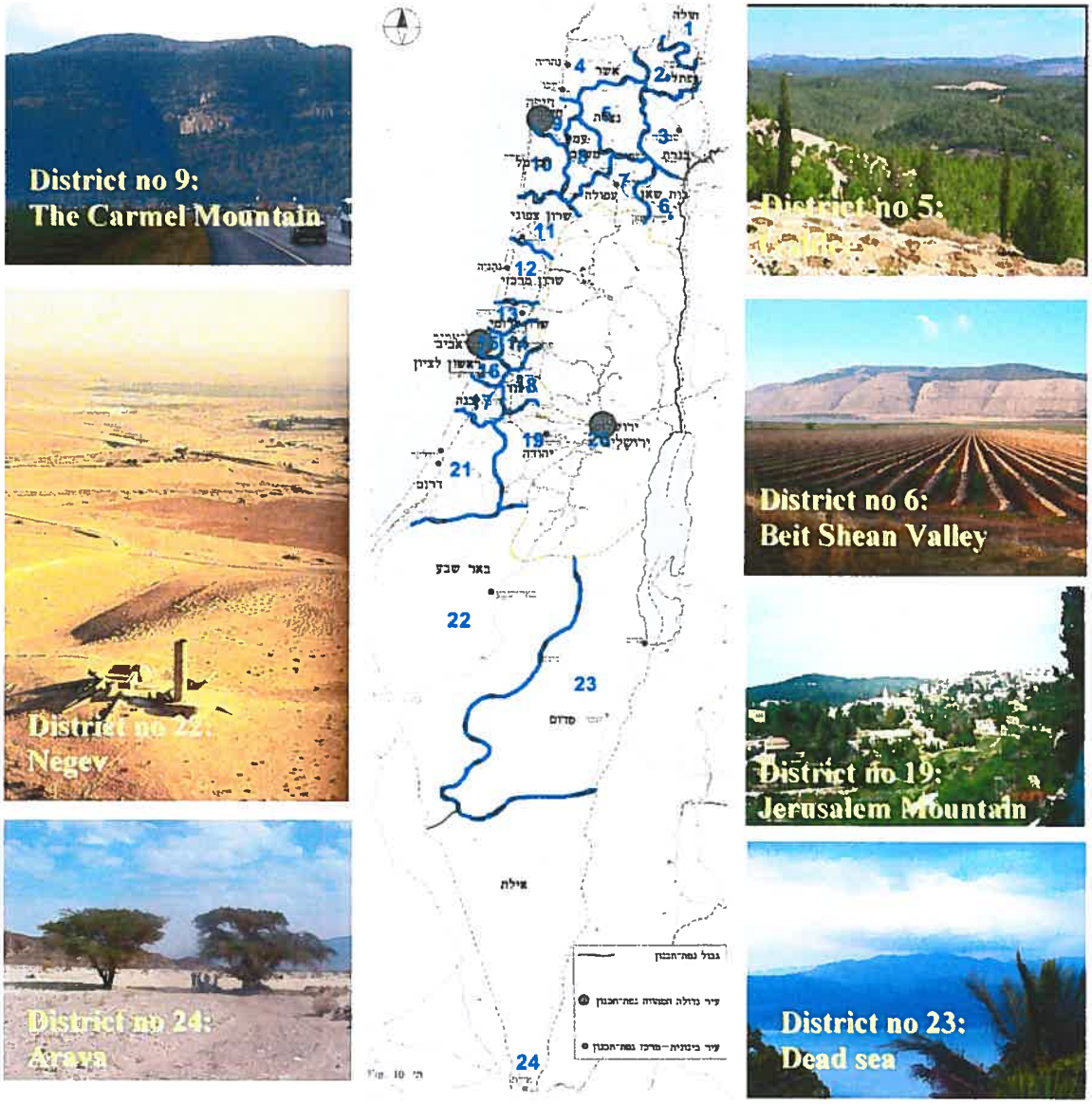

Figure 1. 8: The natural boundaries of each planning district. From Sharon Plan, and typical regions.

(Source: The plan in the center: Sharon, Arieh. *Planning in Israel*. The Governmental printer, 1952.13.)

B. The second type of reference boundary concerned itself with the **boundaries of the cities.** But this boundary actually symbolized planning district boundaries by drawing a virtual line that reflected the environmental logic that was the product of the requirements and dimensions of the cities located in its center. Nevertheless, the virtual (or unmarked) boundary took on a clear and precise shape in the plan as the virtual frontier between the cities and the surrounding vegetation and green zones. The city of Tel-Aviv, for example, received special emphasis, because "i*n the absence of such an area to be* ***defined in a set and clear boundary****, the city is liable to continue to spread endlessly and to include within its boundaries more and more extensive agricultural land, until it completely engulfs its agricultural environment*".[26]

By means of a comprehensive analysis of these two boundary components, one can perhaps identify a certain internal contradiction. On the one hand, this plan involved advanced thinking concerning the concept of the organic city and its environment in so far as it divided areas into geographical planning districts. On the other hand, the internal boundaries of each district tended to reflect an outlook and a tendency to perceive nature and urbanism as two distinct issues. This sort of dichotomy has a deep impact on the way city dwellers relate to nature. It engenders a way of thinking about one's environment in terms of "t*he cities* ***where people live*** *and the non-urban regions beyond the city* ***where nature lives.***[27]

Following up on the development of the urban continuum over the years and comparing it to the boundary definitions in the Sharon Plan reveals that the vast majority of the regional boundaries have remained. These boundaries continue to divide one construction continuum from the next, merging into the outline of national open spaces according to the logic of their location and the values of nature they propound. "The sharp internal boundaries", however, that were meant to divide the city from the green area acting as a boundary to it have dissolved, and, for the most part, the whole area has become a homogenous urban continuum.

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[26] Sharon , *Planning...*, (1952),70.(Heabrew)
[27] Hough, Michael. *Cities and Natural Process*, London and New York:routledge, 1995. 6-31.

Israel's first master plan was approved in 1952 and was generally accepted as "the first physical plan for population distribution based on long term national considerations."[28] The plan was originally meant to come under review in 1960, but it **was not updated and no other comprehensive, long-range plan was drafted until the 90s.** Although many other plans were drafted after 1960, they continued to adhere to old forms and methods as well as to the basic principles outlined in the Sharon Plan (1952), ignoring the change of environments under which the plan was originally designed. In the absence of an alternate comprehensive plan, any event calling for reevaluation was judged separately and in terms of its impact on the existing system.

The centuries-long freeze of virgin environments, being the starting point of the Sharon Plan, stood in sharp contrast to what the planners of the 90s had to encounter. They had to deal with too "small", "over-scattered", empty areas; and, in addition, they had to care for the preservation of the "little" open spaces that had been left by the four decades that had since elapsed.

[28] Larman Architects, *Israel National Master Plan 31.* Ministry of interior, ministry of housing&construction , 1991. (Hebrew)

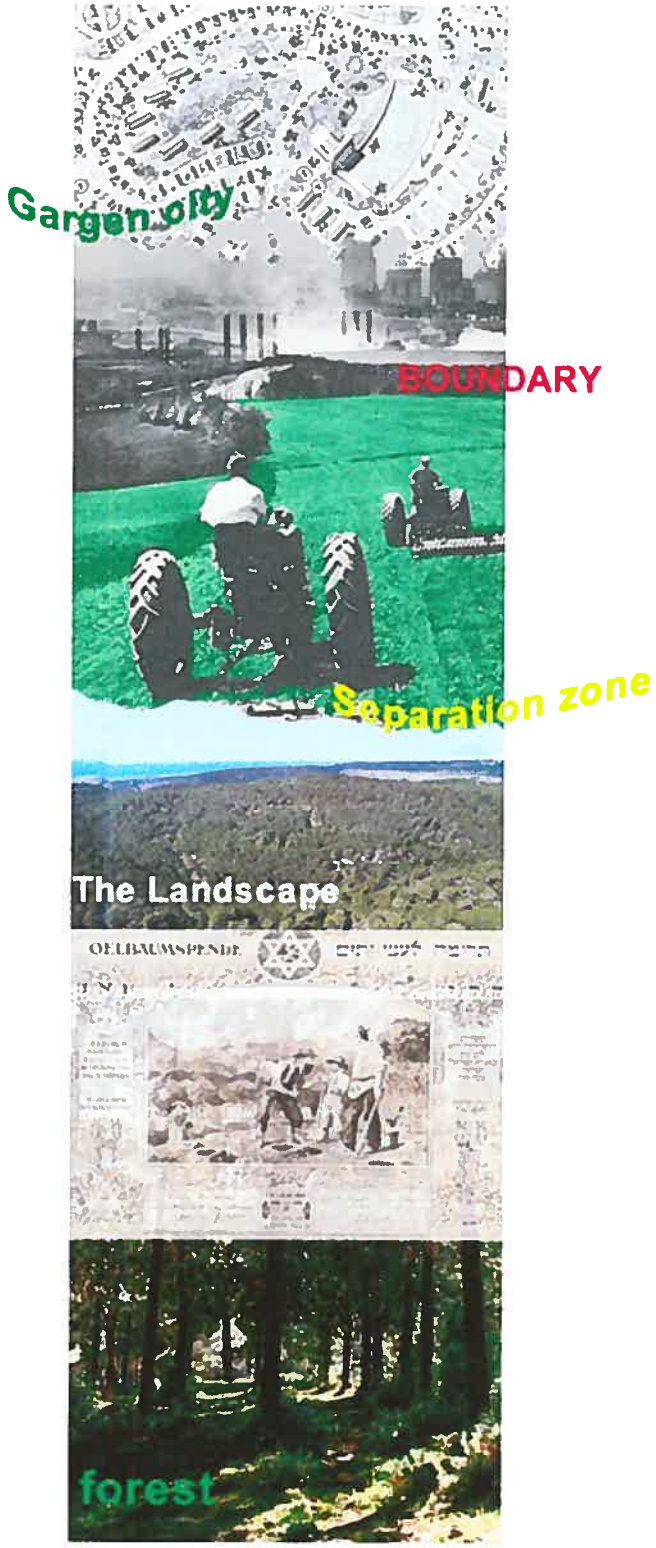

Figure 1.9:
Sharon Plan. The Conceptual Image and Characteristics of Open Spaces.

1.5 Planning the Last Landscape.

"...We must make our commitments now and look to this landscape as the last one. For us, it will be."(Whyte)[29]

The other three master plans that have been made since 1990, and that will be described in this chapter, may be classified as "part two", following the then 40 year old Sharon Plan. Of the three new plans, the only certified plan that has been officially endorsed is TAMA 31 [30].

At the turn of the seventies, 30 years before TAMA31 was officially adopted, a book called *"The Last Landscape"* was written in America by an author named William Whyte in which the author proposes a new concept of national or regional landscape planning instead of vicinity planning. In the summary of his book, White stresses the following:

Open space can help people perceive the structure; open space cannot reshape it...the structure is already set. The topography and the transportation lines are what give structure to the region, and they were laid down a long time ago...they cannot really be changed...most of the big tracts in our metropolitan areas have already been saved, or they already been lost .the most pressing need now is to weave together a host of seemingly disparate elements...if these elements can be linked, each will gain a much greater access, and the sum can make a very effective whole...we must make our commitments now and look to this landscape as the last one. For us, it will be. [31]

Understanding open space as the "last landscape", is the key to the metaphors, scenarios, and terms used in each of the three new master plans (as will be described in the following chapter).

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[29] Whyte, William. *The last landscape.* Tony Hiss. Pennsylvania: University of Pennsylvania Press Philadelphia, 2002. 354.

[30] National Master Plan no 31,1992.

[31] Whythe, *The last...*, (2002), 354.

When planners perceived that there was very little left to be done about open spaces, they proposed solutions that consisted of increasing the density of already developed zones. In other words, to meet the expansion needs of the country, they redefined the directives for these populated areas. At the same time, the directives concerning scarce open spaces were made more rigorous, both in protecting unique landscapes from urban expansion, and in efforts to answer the growing need for recreational spaces as well as for other serviceable zones that could meet the demands of the ever-increasing adjacent populations.

It must be pointed out that Sharon's strong personality was clearly reflected in his scope and goals of his plans, both in theory and in operational directives. He did not just provide solutions but also goals and vision visions. He was the last planner to operate in this manner. After him, there would be a clear distinction made between the goals and the governing and legislating authorities who set the scope to which the planner would provide operative solutions and directives.[32]

My analysis of this plan will try to explain the change in state of mind towards the last open spaces and how it had resulted in a change of definitions and tools that were devised to form and protect the "last landscape".

[32] Alterman, Rahel and Avi Musery. *The National Planning –from the past to the future.* Mazor Adam and others , report A, stage A, volume A . Israel 2020 Master Plan for Israel in the 21st century, Technion-Israel Institute of Technology,Faculty of Architecture and Town Planning, Samuel Neaman Institute for Advanced Studies in Science and Technology,1997.3-35.(Hebrew)

1.5.1 National Master Plan 31(TAMA 31): "The National Integrated Plan for Construction Development and Immigration-absorption" (1992)

"In a society that continues to experience substantial growth as well as change and one that is ever more prone to disposability, we can no longer afford to wait for two or three generations to elapse before we focus on preserving things". Richard Longstreth [33]

In the period that had passed between the drafting of the Sharon Plan and its realization, a worldwide conceptual revolution occurred, in which post-industrialism pushed forward the environmental issue as the main threat to mankind. During this period, Israel had entered vicious cycles of war with its neighboring countries. Israeli victories resulted in the annexation of more parts of historic Palestine, but following international pressure to retreat and a few years of cold peace, the cycle would begin all over, and end the same.

These expansion and retreat situations had been reflected in TAM31 plan, a plan that had to take into account two main factors:

1. The urgent need to have an updated national master plan adjusted to the substantial changes that had occurred, rendering the Sharon Plan obsolete both in concept and in reality.
2. Israel's victory in the 1967 War and the territories that had been open for Jewish settlement since (some annexed legally and some given the status of "held territories"). Rachel Alterman states[34] that changes in the priorities of national security were drastic; and situations arose where former frontier settlements suddenly found themselves in the midst of the country. This resulted in the need for new defense lines to be designed; and such dramatic territorial shifts had overturned and reshuffled all of Sharon's objectives and considerations. In fact, in the policy declaration of the government

[33] Longstreth, Richard. "The last Landscape." *Preserving Modern Landscape Architecture: Making Post War Designs Visible* , (April 2000):5-6.

[34] Alterman , *The National...*,(1997),3-35.

elected at that time, the traditional goal of "population dispersal" was no longer on the agenda, and this was coupled with a reluctance to include development and settlement plans for the held territories for political reasors.

At the end of the nineties, once Jewish immigrants from the eastern block began to pour in, an estimate was made of an additional one million inhabitants within five years. This wave of immigration underscored the "price" that was to be paid for the lack of a long-range infrastructure plan. Tremendous development works were implemented without the benefit of an overall plan. Instead, they were guided by considerations of "availability", and by a wish to attain quantitative objectives in the shorter term.

The next three plans described in this work were originally designed to deal with the large stream of immigration, both real and anticipated. In addition, the changed political situation returned the scope of the plan to the "green line" demarcations with the diminishing open spaces that were in tremendous demand. TAMA 31 was meant to be an interim plan, providing a solution to some of the overall problems, but the plan was designed to be implemented over a short-term period of only five years. Despite the five year scope of the plan, the absence of an approved new plan has led to the continued reliance on TAMA 31 to this very day. As the TAMA *35* Plan awaits approval, TAMA 31 continues to shape the map of Israel as it has done for the last decade. A period during which absorbed close to one million immigrants, and significantly improved its economy.

As explained above, this substantial wave of immigration caught Israel off guard and unprepared (Lerman 1991). TAMA 31 is the first since the Sharon Plan to involve a great number of official bodies; and it is the first to make an overall planning attempt rather than setting goals of demographic redeployment. TAMA 31 takes into account all country parameters, thus placing the plan in a status between *regulating* statutory planning and *initiating* statutory planning. This plan, targeted for 5 years, and meant to solve the pressing issues of rescuing open spaces from complete liquidation, lost the naiveté expressed in the first plan.

1.5.1.1 Basic principle:

This plan was prepared under conditions of rapidly expanding urban areas all over the country, with highways and roads threatening to tear apart what was left of the continuous landscape ecology. These were the planning principles of TAMA 31:

- **Preference for concentrated over scattered:** This was the first plan that was to move away from the population scattering policy of previous plans. Its focus was on four main urban areas (Jerusalem, Tel-Aviv, Haifa, and Beer Sheva), concentrating the greatest population mass of Israel around them **(Figure 1.10).**

  It must be noted, though, that these metropolitan centers did not have a graphic expression on the drawn plans, and were only expressed in the written plans. Part of this principle is expressed in placing new planning inside the metropolitan areas, unlike the past manner of expanding out of the cities into the open space.

- **Conserving the land:** This principle has been reflected in actual planning in three ways:

  1. By marking a network of national parks, similar to the Sharon Plan, but with a difference. The National Master Plan No 8[35] that came into effect in the period that had passed between the two plans, and which imposed a statutory directive to preserve these areas.

  The new category of "open rural landscape" **(figure 1.11)**.This category fell between the officially protected

Figure 1.10
This was the first plan that had transformed from population scattering policy of previous plans, to focus on 4 main urbane areas (Jerusalem, Tel-Aviv, Haifa, and Beer Sheva)

(Source: *Land Resource in Israel, Development Policy and Principles planning.* presentation by Kaplan Moti, November 2003.)

[35] Israel National master plan for nature , scenery reserves, and national parks.

areas of the official reservations and the urban areas. It encompassed areas that, according to the plan's directives, are to be preserved for agricultural cultivation, rural landscape, villages, recreation centers, and rural facilities and institutions, as well as open space reserved areas.

3. Directives for environmental preservation have been added to these two components.

1.5.1.2 Landscape design:

Upon examining the development of landscape planning as it evolved in the minds of state planners, TAMA 31 emerges as the first in which substantial efforts were invested in landscape preservation. It was the first plan to form a barrier, and bring urban spreading to a halt, or at least to substantially slow it down. This change in planning priorities draws awareness to the fact that landscape is no longer viewed as being in need of redesign, and that the earlier approach to landscape resulted in a policy of over-shaping that almost eliminated it altogether.

To encounter the ever-growing demand for new residence facilities, decisions had to be taken to density the existing residential centers, taking into account future growth in habitation needs as well as the environmental results of such steps. To this purpose a "Map of Nature and Landscape Resources" was drafted, in which sensitive, highly valued open spaces were identified. These districts were closed to all development "except for recreation purposes, tourism, environmental preservation, infrastructure facilities, and agricultural cultivation of the land."

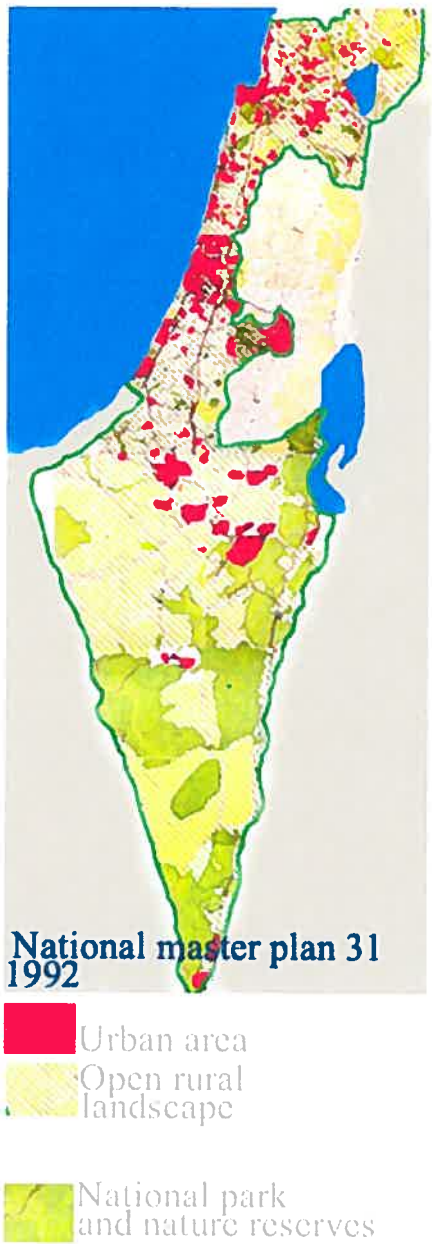

Figure 1.11
National Master Plan 31

(Source: Larman Architects, Israel National Master Plan 31. Ministry of interior, ministry of housing&construction, 1991.)

1.5.1.3 Planning Language:

As stated earlier, the main revolution in terms of planning language was the idea of the "last landscape". Planning language in this case had expressed the notion that the consumption of old open space due to the policy of population spreading was over forever. The time had come for urban growth, both in the centers and at the outskirts of the cities.

This planning language had, for the first time, identified the core of urban centers in Israel, namely the triangle of Tel-Aviv, Natania, and Ashdod. Having identified these sites, planners drew lines around areas destined for urban development, and attempted to provide solutions to the quickly growing demand for housing without harming the open areas.

In contrast to the Sharon Plan, the new planning language provides a long list of objectives, but does not refer to how these objectives are to be realized individually.

1.5.1.4 graphic expressions:

The main graphic means to achieving these goals is by making sure that there are no undefined spaces on the map. Such rigor in the planning process prevents any possibility of territorial mismanagement. In order to form a carefully balanced overall structure, together with clear status definitions for each area, the plan emphasizes the difference between metropolitan and rural settling (**figure 1.11)** by clearly and carefully defining maximum population densities, area perimeters, and levels of open landscape preservation. Of course, delineating areas on a map does not achieve goals, but it does demonstrate clearly the essence of this program, and how different it is from the others. Earlier plans envisioned a landscape in a relatively empty country that was to be filled with an inundation of millions of Diaspora Jews. But this plan, which also had to provide settling solutions—in this case, for a million Soviet immigrants—was operating in an already populated environment. Confronted with a relatively narrow array of choices, the plan had to develop the openspaces rather than design and preserve them. The open spaces had to be defined and suited to contemporary Israel's reality rather than manipulated to suit unachievable Zionist ideals.

1.5.2: Israel 2020- Master Plan for Israel in the 21st Century, (1996):

Toward the end of the twentieth century, when the validity of the National Master Plan 31 was to expire, both the planning circles and the planning administration felt that an updated master plan was required to guide the country's development through the entire 21st century. The new plan was to be detailed up to the year 2020, and more general and flexible thereafter. The need for planning was not motivated by the needs of an "empty" and "sparse" country; on the contrary, the spatial density and the danger of land resources running out were the issues at stake.[36] At the time of the plan's preparation, Israel was one of the most densely populated countries in the western world, its population continuing to grow at higher rates than those accepted by developed western countries. Thus, planners were confronted with a population problem while constantly striving for higher standards of living. This plan is an important reference point in the planning process of the Israeli State. Over two hundred and fifty professionals from Israel and the world took part in drawing up the plan. This plan is a conceptual master plan, but not a binding statutory plan.

1.5.2.1 *Basic principle:*

This plan follows the basics of plan 31 while sharpening the focus on environmental preservation, knowing that without precise boundary definitions for all land usage, preservation of the little open space remaining would be impossible. The planning principles of this program were as follows:

- **Concentrated Dispersal:** Development at the national level is dispersed, whereas, at the regional level, it is concentrated. The plan strives to concentrate development in the northern, and particularly in the southern peripheral regions of Israel to decrease socio-economic disparities, and to preserve the open spaces in the central region.

[36] Mazor Adam , *The Vision of the future The Spatial organization plan for Israel.* Israel 2020 Master Plan for Israel in the 21st century.Technion-Israel Institute of Technology,Faculty of Architecture and Town Planning, Samuel Neaman Institute for Advanced Studies in Science and Technology,1997. (Hebrew)

- **Preservation of the continuance of open spaces** on a national level.
- **Grouping open spaces into "green centers"** at the heart of the urban spaces to preserve the continuity of these green zones and to ensure accessibility to the masses populating these areas.

Figure 1.12:Israel 2020 Plan ,Basic Principles

1.5.2.2 *Landscape design:*

The primary objective of this plan is to strike a balance between open and populated spaces, while maximizing the preservation of landscapes. This plan will achieve its objectives by **exposing** and enhancing those highly valued natural spaces and regions that still exist. Further, it will increase the available resources of open spaces even within metropolitan areas. Israel 2020 strives for **spatial diversity** instead of the preplanned and single-minded objective of "conquering the wilderness" that characterized previous plans. According to the ideas exhibited in Israel 2020, such thinking is outdated, because it leads to the destruction of land reservations and of environments that may be rehabilitated.[37]

Identifying and mapping landscapes and sites worthy of preservation was performed using two kinds of maps:

1. Open space valuation maps.

2. Regional landscapes of Israel.

[37] Kaplan, Moti. *The layout of open space,* Attach 1 from The Range of Option for the Future Spatial Organization of Israel: The Physical- Environmental Alternative. Israel 2020 Master Plan for Israel in the 21st century, Technion-Israel Institute of Technology,Faculty of Architecture and Town Planning, Samuel Neaman Institute for Advanced Studies in Science and Technology,1996. (Hebrew)

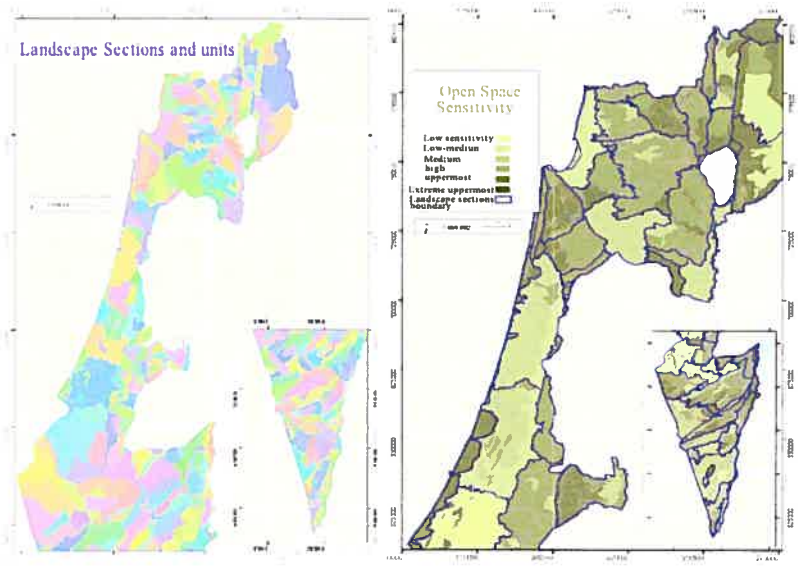

Figure 1.13 : landscape section and units map (left) and open space sensitivity map(right) , from *Israel 2020.*

(Source: Mazor, Adam. *Long range planning to Israel-rational and method*, preface. Israel 2020 Master Plan for Israel in the 21st century, Technion-Israel Institute of Technology,Faculty of Architecture and Town Planning, 1997. 12)

This separation in the mapping process was meant to underscore the values of each landscape sector, and to clearly define the directives for local planners and developers. Establishing specific guidelines for each zone and sector based on careful evaluations of the landscape unit in question is meant to direct the planner clearly in terms of what can or cannot be done with a specific area[38] **(Figure 1.13)**.

Since quality areas are highly valued by all, an inevitable conflict arises between the private interests of individual developers and the national interest in environmental preservation.

The plan offers a solution to the conflict by instructing the developers of sensitive areas to abide by rules of landscape **character preservation**. This solution thus offers a continuance of land development while simultaneously preserving landscapes according to the predefined guidelines. This "preservation of characteristics" technique, hand in hand with the "non-touchable" sectors and the protected open spaces, provides, if not a perfect solution to the conflict, at least an optimal compromise.

[38] Kaplan, *The layout...,(1996).*

The development of valued areas is to be performed by combining local characteristics with the purpose of the developers. Compliance with these directives is entirely the burden of the developer. His plan and its compliance with the rule of preserving the local characteristics must pass the scrutiny of the examining comity on two levels:

- The Positive Level: He must demonstrate how the proposed development will enhance the local area according to the defined values of the master plan; and he must demonstrate how his program is going to integrate its function as well as its appearance with these set values.
- The Negative Level: The developer must prove that the proposed program will not impair local area defined values.

1.5.2.3 The Organization of national space:

Solutions to the diminishing open spaces lie mainly in the treatment of urban areas. If building is saturated, efficient, and contained, it will ensure housing provisions for large populations without spilling into and harming the open spaces. This basic principle of Israel 2020 is described in "Picture of the Future", a report by Mazor & Sofer (1996):

"Intensive and efficient land use is an inevitable result of its shortage. There are many examples today of high quality residences built in dense, concentrated quarters that are maintaining excellent environmental quality. Demand for low density, single housing residence by strong populations expecting high standards can be directed to the peripheries in the north and south where such a population is needed. There is no chance to have them move if they still can find an alternative in the center. Fiscal measures to subsidize such building in the center and meant to solve short term problems must be prevented". In summary, this plan is to manage national space by constructing metropolitan centers, by reconstructing and efficiently saturating existing urban areas, and by establishing buffer zones between metropolises and the green centers inside them.

1.5.2.4 Planning Language :

This program, though not statutory, took Plan 31 a few steps further by defining land zones through explicitly detailed graphic and linguistic explanations; in other words, by drawing

borders and defining the values of each zone. This approach would include metropolitan compounds, which in addition to being fit for habitation, and providing a solution to housing demands, also form a valued landscape product. The plan is academic, and, as such, presents its agenda as "objective" and timeless: the rescue of Israel's landscape and the preservation of its most valuable spaces.

This approach, in relation to the Sharon Plan, reveals a complete revolution in perspective. The earlier plan drew its ideas onto an empty terrain preceding the settling of the country, and introduced a uniform planning language that turned out to be alienated from local values, culture, and history. In contrast, Israel 2020 endeavored to develop the country using local values, which necessitates efforts of detailed planning for each locality and each site. In contrast to Sharon's uniform approach language, this new plan tries to form a flexible planning language for each part separately as well as some general language for rules that can be fitted commonly.

The following are implementations of the principle of Concentrated Dispersal, within the country's division into seven regions:

- Three "**Urban Regions**"(**figure 1.14**) which are located in the north, center, and south, covering 20% of the country's area and housing, at present, 80% of its population. These regions are characterized by high population density. The Urban Region model includes clear boundaries that are intended to concentrate future development and prevent "spilling over" and "suburban sprawl" into adjacent regions. These measures dictate the location of economic activities upon the corner and along the edges of the urban regions, while at their center, a large open land reserve area called "green heart" is planned so as to be easily accessible to the surrounding population.[39]
- Two "**Intermediate Regions**" (**figure 1.14**) serve as buffers between the urban regions. At present they maintain a spatial equilibrium, balancing 14% of the country's area with 12% of its population. These regions combine existing rural areas and sites, chosen as worthy of preservation. Planning efforts in the intermediate regions are geared to prevent suburban sprawl and metropolitan overspill between urban centers.

[39] Mazor Adam , *The Vision...(1977)*

The Intermediate Regions Model reinforces urban activities along the main traffic routes and intersections while preserving the open spaces that separate them.

- Two "**Open Regions**" (**figure 1.14**), which are located in the northern and southern peripheries, possess a high concentration of natural resources and scenic areas, and include 66% of the area of the country and a meager 8% of its population. Open Regions are areas that span over extensive natural environments. The Open Regions Model promotes preservation, limiting urban development to the intersections of the main roads where the centers of the highly scattered rural communities are located. Towns, villages, and infrastructures are planned so as to be compatible with natural forms.[40]

As mentioned above, in addition to the seven planning regions, the plan proposes a parallel division of *"protected open zones for the preservation of nature"*. The planning model for these zones extends the scope of environmental protection to concentrations of specific sites, such as nature reserves, scenic areas, national parks, groves, and forests.

Figure 1.14
Israel "2020" , Master Plan for Israel in the 21st Century.

(Source: Israel 2020 Master Plan for Israel in the 21st Century. *Combined Spatial Strategy.* Technion-Israel Institute of Technology,Faculty of Architecture and Town Planning,1997.)

[40] Mazor ,*The Vision...*,(1997)

1.5.2.5 Boundaries:

The term "boundary" appears throughout all of the plans in the context of the restriction on construction in the direction of the open space, Since the boundary is not a mere two-dimensional defined frontier in the plans[41], it takes on a different dimensional meaning according to its delineation in each plan. The term "boundary" has two meanings in this plan:

- An analytical definition of the boundary city of a having a high-density population nucleus surrounded with rings of minimum habitation. This model is meant to direct, through highly disciplined concentrated planning, any future increase in population inward into the heart of the zone, not allowing the sprawl of low saturation housing in its perimeters, which are to remain strictly open.
- The second connotation of the term "boundary" in this 2020 plan is the wider definition of "Intermediate Regions" (**figure 1.14**). As mentioned above, these regions are large, interlinked, and continuous open spaces that act as dividers between the dense metropolitan zones. And, on a national scale, they form a clear, distinct, and continuous chain of non-populated regions.

I will discuss the question of the difference between these two meanings and the subject of the border in general in detail in chapter No. 3.

[41] Souquet, Olivier and Defrain Francois. "Brest: an anatomy of boundaries." *Topos*, 30 (March 2000): 55.

1.6.3 National Master Plan 35 (TAMA 35):" Integrated National Master Plan for Construction Development and Conservation." (In process):

Toward the end of the 20th century, after preparations for the Israel 2020 plan were completed, the Ministry of the Interior's planning administration designed a plan that was a combination of development and preservation. The aim of this new plan was to "translate" the Israel 2020 plan into a statutory planning language, and to combine it with the remaining national master plans.[42]

Plan 35, as the new plan was called, is widely based on previous plans. Some of the background situations these plans encountered had a strong influence on the new plan. The privatization of large-scale housing projects, which were previously controlled by public or state development bodies, have turned some of the previously preserved and highly valued areas into real-estate for the free market. Simultaneously, due to recent state legislation, there has been a distinct decrease in the amount of central control exercised by the Ministry of the Interior over the land policies of local municipalities.

The plan's target year is 2020, when the country's population is estimated to reach 8 million. In other words, this plan is continuing along the same lines set out in plan 31, which gradually crystallized in Israel 2020 by developing a new planning language that confronted the dilemma of fulfilling the requests for land so as to enable quick and flexible development together with maximum preservation of agricultural land and open spaces. This language is based on a planning principle borrowed from Dutch and French national plans from the 90s[43], which used the idea of "search areas" surrounding the urban settlements. This program does not define land designations, but identifies boundaries in which the public or private developer can find the soil suited to him for building purposes. Restricting the building areas to "search areas" was designed to provide maximal protection to the agricultural and open areas defined as "conservation levers".

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[42] **Shahar, Arieh**. "Protection on Agriculture Land." *Karka, The Land Policy and Land Use Research Institute*, 55 (September 2002).
[43] **Shahar** , *Protection*...(2002).

1.6.3.1 *Basic principle:*

As mentioned above, this plan meant to convert Israel 2020 into a statutory planning language, retaining the following basic principals:

- The **Concentrated Dispersal** principal, first developed in Israel 2020, refers to the concentrated development of existing metropolitan clusters, the efficient exploitation of land, and the prevention of the formation of small non-continuous urban centers.
- The metropolitan structure motive repeats itself in all three plans. Here, steps are suggested for encouraging the process by allocating national resources for the development of metropolitan centers, and living increasing standards to attract a population to these centers.
- The preservation of open, rural, and scenic areas by preventing them from turning into residential suburbs. Two Million Dounams were designated for national parks and natural reservations in addition to what had been assigned in the national master plan no8[44].

1.6.3.2 *The Planning Language:*

This plan converted the planning zones of Israel 2020 to a distinct definition between developable and preservation bound territories, by introducing a new term in the planning language: "**texture**" (**fig 1.15**). A special "textures plan" was drafted to define the different texture zones; each explicit area has its own blend of different land usage, development levels, and preservation in differing proportions. Clear directives for each texture have been established within the plan.

The language of textures is more suitable to the creators of this plan for directing long-term land usage than those that existed before, because it allows for a better definition of the restrictions while still leaving a "*wide searching range within the defined textures, as long as a number of planning rules are observed like: 'pushed to the wall planning', 'minimal density', 'preservation of scenic sets and highly sensitive landscapes' ".*[45]

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[44] National Master Plan to Nature , Scenery reserved, and National Parks

[45] Asif . *Integrated national master plan to construction development and conservation, National Master Plan 35. The main issues,* The national council to planning and construction, 2002. (Hebrew)

The plan classifies six kinds of texture (figure 1.15):

a) "Urban", "urban-rural", and "rural" textures indicate the suitability of an area to become rural or urban.

b) "National preservation", "combined preservation", and "coastal" textures indicate areas of preservation and nurturing.

The textures do not act as building permits or as defined in the national planning and building act. Inclusion of a certain area in an urban texture zone does not mean it can be filled up completely, as there are predefined percentages of non built-up area to be left within any metropolitan compound. These open areas are to provide green lungs inside the urban texture and be a reserve for future development.

The inclusion of an individual stretch of land in one of the six textures does not automatically classify its destination. TAMA 35 does not dictate the placement of open spaces within the textures, but leaves their deployment to local counties and municipalities. Nevertheless, the texture definitions serve as planning guidelines for future development.

It must be noted that since urban textures include, at present, rural horizon spaces, there is a possibility that local planning authorities will allow an undesired spread of urban suburbs before full exploitation of building areas within the center of the cities has been achieved.

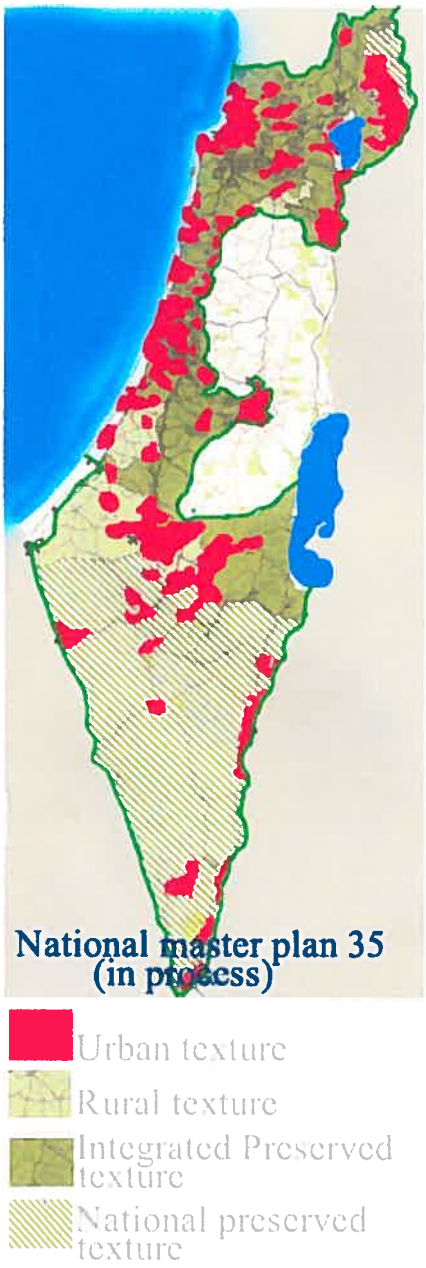

Figure 1.15
National Master Plan 35, 2003

(Source: From the prospectus, *Nation -perusal day in the subject: National Master Plan 35 integrated national master plan to construction development and conservation.* Israel Ministry of interior ministry of housing&construction. Tel Aviv, march 2001.)

1.6.3.4 *Boundaries:*

This plan, like Israel 2020, considers boundaries to be crucial in restricting urban sprawling as well as preserving the landscape continuum. In this plan as well, "boundary" has two meanings:

1. A "dead end" not to be crossed: As phrased in the plan's commentary: "*metropolitan border lines as marked in this plan are "red lines" that confine the big urban continuums of Israel.*"[46] The vision was that these boundaries of the urban texture would provide for the full housing demand for a period exceeding the time-frame of the plan.
2. To keep the saved non-settled areas as "boundary spaces" between the developed areas: "*landscape strips are **open buffers** marking the urban texture. No certification will be granted to a 'regional directing plan' that will alter a strip designated as a reserve into an area for development*"[46].

The plan does not set rules regarding the content of open spaces, but necessitates that a scenic plan be appended to the plans submitted in these districts. This procedure is meant to ensure the preservation of areas with "*high environmental value*".[46]

1.6.4 Summary

The principles common to all three plans are:

1. **Concentrated Dispersal:** A principle that was meant to replace the obsolete idea of "dispersal of population", first devised in the Sharon Plan, and which prevailed long after the objective conditions had changed and rendered it unsuitable. Its continuance (to the joy of real-estate businessmen) caused serious damage to the country's reserves of open space.

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[46] Asif . *Integrated national master plan to construction development and conservation, National Master Plan 35. The main issues,* The national council to planning and construction, 2002. (Hebrew)

2. **"The Last Landscape" syndrome:** This notion held that Israel's land resources had long ceased to be boundless, and that land was, in fact, a precious resource. Viewed as a rapidly depleting resource, it had to be treated on a national scale—hence the necessity for preparing well defined individual plans for each region and establishing landscape buffers between urban areas.
3. The **Urban Space** principle: Each specific urban zone could not be individually treated, but had to be treated more generally as a way of planning according to the priorities of people's lives in terms of housing, employment, and environmental standards. These red and orange lines explicitly defined the spaces designated to fulfill the pressing need for housing development, leaving the rural open areas free.

The future of the country's landscape embedded in these principles was translated in each of the plans into different terms and textures (**figure 1.16).** As a result, the future shape of the country is in many respects uncertain. It is true that, on a national scale, the strengthening and nurturing of natural scenic buffers between the cities is evident, but since this program leaves the final use of a large proportion of open spaces to local decision makers, the future character of the urban landscape is unclear.this was clearly the intention of those who framed the current plans.

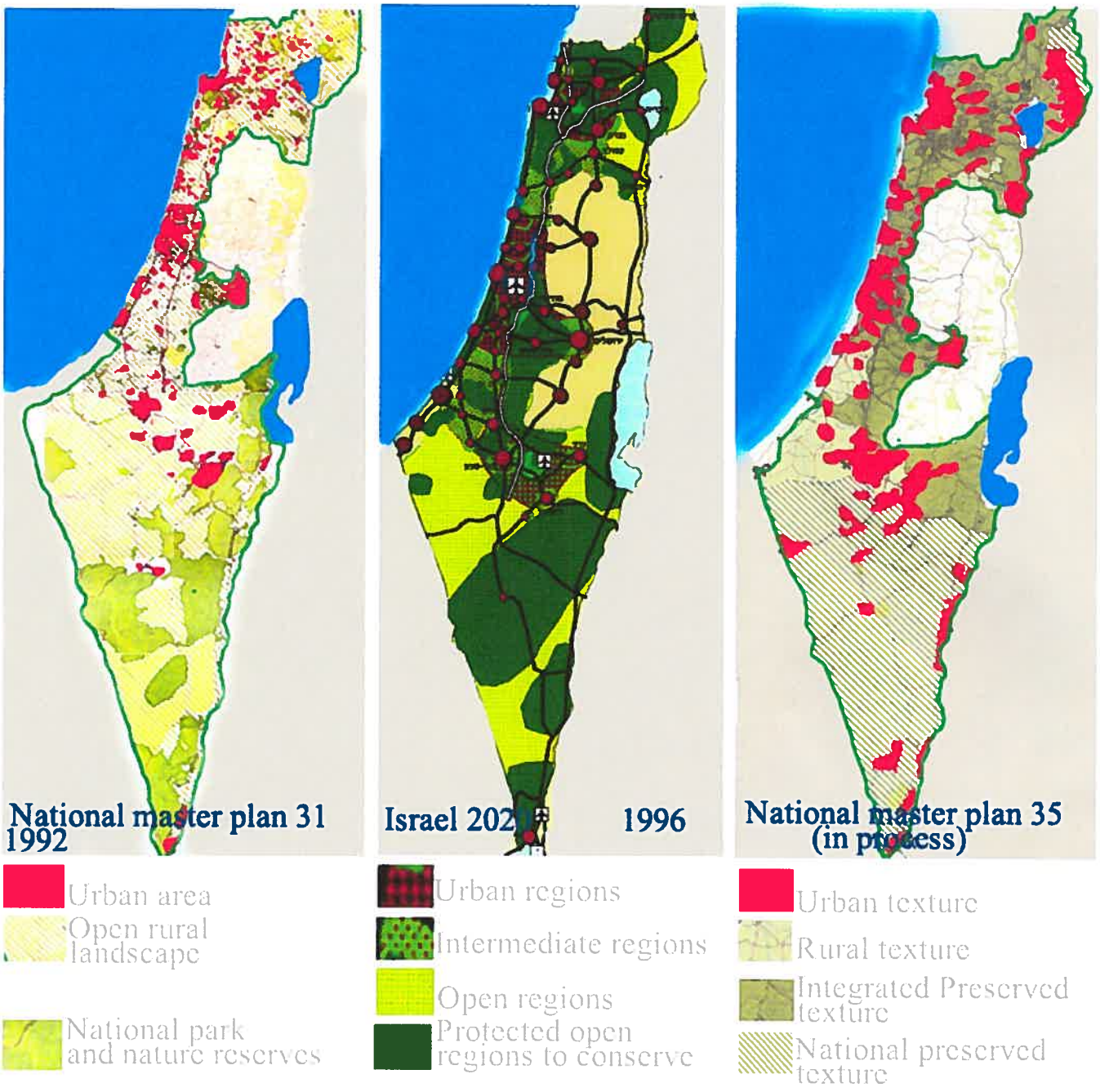

Figure 1.16: *Comparing the different definitions used in the last three Israeli national master plans issued.*

1.4 From the pioneer to the last landscape:

The initial picture emerging from this survey of long-range plans shows that the planning process in Israel can be divided into two main time frames, contrasting in perspective, ideology, and in the translation of these plans into reality. Until the 60s, most national activities were implemented according to the planning concepts of the Sharon Plan. As of the mid-sixties, however, this planning concept could not any more serve as a basis for the planning policy, despite its scope and merits. This is the result of the increasing gap between the plan's basic hypotheses and the changing environmental characteristics.

From this point on, there was no longer any planning rationale for budgeting the development throughout the national expanse: Israel has developed and was no longer an "empty" and "sparse" country which needs to strengthen and secure its existence through a policy of spreading the population. After many years of population dispersal, Israel already found it difficult to find its "bare spots". Too many "small ones" threatened to become "big" against their will. The "new" chased "the old", the "public" longed for "private". New planning problems, primarily that of addressing the growing density, demanded intrinsically different physical solutions. Regardless of these, the historical planning doctrine has not changed, nor was any new, long-range, comprehensive national plan prepared for the State of Israel until the nineties, which brought about an upheaval in the planning concept, starting with plan 31 and onward, as described above. The following table (**table 1.1**) summarizes the changing in context of national planning, from the vanguard planners of a raw unpopulated land up to the later ones that had to cope with an interrupted non-continuous "last landscape."

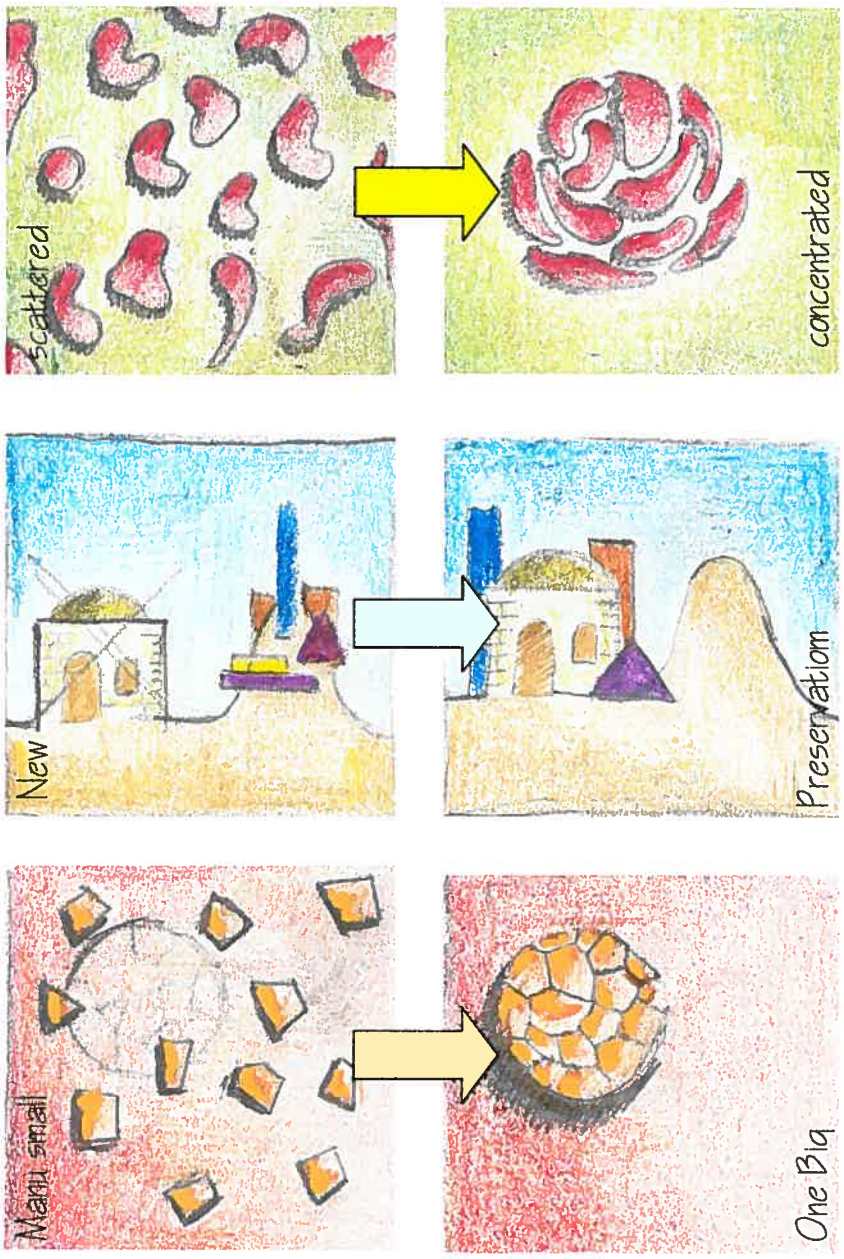

Figure 1.17 From the Pioneer to the Last Landscape, Basic Principles.

	Planning the Pioneer Landscape "Sharon" Plan, 1952	***Planning the Last Landscape National Master Plan no 31,35 and "Israel 2020"***
Landscape Design	Creating the landscape	Conserving landscape
The Organization of National Space	Development	Preserving open spaces.
The Planning Language	Common language on the national level, diversity on the regional level.	Individual planning according to ratio and quality of each landscape unit on the national level
Graphic Expressions	Detailed local planning. Specific planning and regional definitions	"Search areas" comprehensive planning and definition in the regional area.
	Differentiation between "empty" spaces and "green" areas destined for preservation, as national parks.	Definition to each acre.
The Planning Image	"Conquering" the land	Appreciation, exposure, and preservation of nature as a valued resources
	Sanctification of the "new"	Sanctification of the "old"
Basic Principles of Planning	**Dispersal** "Scattered" is preferable to "concentrated", "Many smalls" are preferable to "one big" "New" is preferable to "old"	**Concentrated Dispersal** "Concentrated" is preferable to "Scattered", "One big" is preferable to "Many smalls", "Old" is preferable to "New"
Boundaries	Boundary installation, flexibility, undefined city limits	Reality sets boundaries, stiff definitions in order to preserve them.
	Definitions arising from deeds	Deeds definitions
The city Character	Garden City	Dense urban zones leaving more open space, "green lungs" in midst of city.

Table 1.1: *These table summarizes the changes in context of national planning, from the earliest planners of a raw, unpopulated land to the later ones who had to cope with an interrupted non-continuous "last landscape."*

It can be concluded that with the diminishing number of open areas, the color of the plans becomes greener, and the definition of each piece of land becomes more important.

In contrast to the Sharon Plan, which had detailed directives for each urban part, the directives in recent plans regarding urbanization are getting more vague. And because of the constantly evolving urban continuum, which has predetermined outlines of the national landscape, the detailed directives in the newer plans are left for local decision makers (except for the city's "green lungs"—introduction).

In the early days of the state, environmentalists energetically focused their attention on saving endangered animal species while extending protection to certain open areas with particular historical or natural value. Only later did they expand their activities to what become known as "unprotected open areas". (Mostly agricultural lands and some other categories of land unprotected under the law).

Planning objectives as well as the character of the future country have thus been translated through a planning process into colors and textures that reflect aspirations, fears, restrictions, and thought processes. The next chapter examines the image of the Israeli landscape as portrayed in this process—how the textures, shapes, definitions, and colors are translated into a landscape mosaic.

CHAPTER II
Critical Issues: Boundaries and Urbanization

The statutory classification of land is generally meant to form a uniform base for potential planners as to the planned operational purpose for each specific open area that might cause open spaces to shrink or vanish. Demonstrating strong efforts to preserve open areas and to confront harmful development pressures, each of the four state plans sets new and different approaches to open space definitions and characterizations.

When one actively attempts to examine the mosaic of Israel's landscape as reflected in each of the national plans, two main issues reappear. The following section addresses these two issues, reviewing the changes they have undergone in an attempt to illustrate and explain the development of the Israeli landscape. These two issues are as follows:

1. ***Boundaries*** encompassing the term's physical and symbolic meaning throughout the national plans , while testing the physical product and its impact on the fabric of the landscape and the layout of open areas.
2. ***Urbanization*** and the yearning for the utopian urban landscape as reflected in the national plans. This is a landscape resulting from two main factors: (1) the nature of the cities and their distribution, and (2) the nature of open landscapes and all the implications tied to it.

(Sorce: (left): *Ambrogio Lorenzetti's fresco in the Palazzo Pubblico,painted c.1340. in* Kostof, Spiro. *The city assembled, The Elements of Urban Form Through History.* Boston & New York &Toronto &London: A Bullfinch press book little, brown and company.1992.17.(right): Ministary of Environment< sababa.sviva.gov.il/areas/ about/about2.asp>

2.1: Boundaries

..."I feel I exist on the boundaries... finding the place where opposites meet...existing not on either side, but on the line that divides. And that line takes on a dimensionality, it takes on a sense of place and shape." Maya Lin [48]

The boundary issue is an integral part of urban planning from the very start. City limits, which in the distant past were a question of survival, have undergone extensive conceptual changes throughout history.

As mentioned above, city limits are not perpetually frozen lines. They must be adjusted as the settlement grows or shrinks through time. Diminishing open spaces or their changing character, reflect changes in the conceptual and dimensional markings, that the boundaries have undergone over time. In a country like Israel, the "landscape traces" of the way "boundaries are bound" will affect the destiny of its landscape.

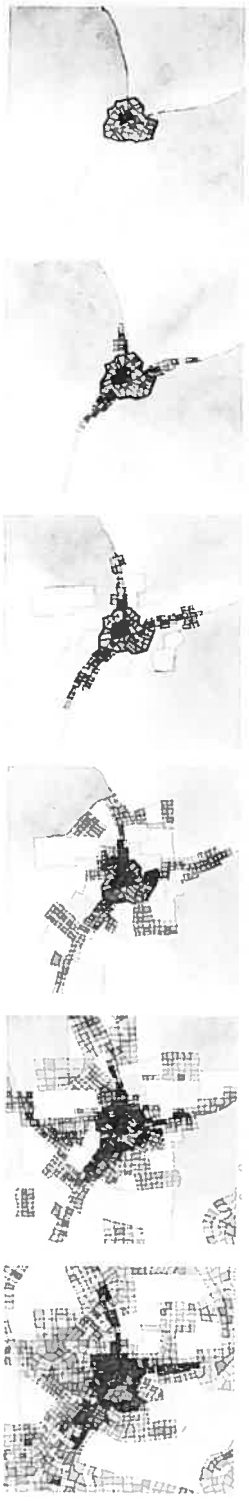

Figure 2.1; *City bounds are not frozen perpetually, they must be adjusted as the settlement grows or shrinks through time...*
(Source: original drawing by Richard Tobias. *in* Kostof, Spiro. *The city assembled, The Elements of Urban Form Through History*. Boston & New York &Toronto &London: A Bullfinch press book little, brown and company.1992.34-35)

[48] Lin, Maya. *Boundaries. New York: Simon & Schuster, 2000.*

The landscape has become fragmented [49]. Before the explosive growth of the cities, the visual edge between town and country, which was the consequence of productive, economic, and functional connections, was clear and well defined. The town drew its character from its regional setting. From within looking out, or outside looking in. [50]

Urban expansion now spills over into the rural environment that no longer serves the productive and symbiotic relationship it once had with a particular urban space. What is left of the landscape is now fragmented within the city. Where the land has retained its basic topographic or biological character, either fortuitously or by design, it can maintain something of its original identity. But generally, the conditions that created the essential identity of a particular urban environment have been lost. The identity of the contemporary city is largely dependent on the character of its indigenous landscape.

As mentioned in the last chapter, since a boundary is not a two-dimensional line, it takes on different dimensions, being grasped and delineated differently in each plan. Nonetheless, each plan uses this component as a tool to express a "red line" for the designer. This red line's position will be modified throughout the plans as will its dimensions and significance.

The term "boundary" appears throughout the plans in the context of restrictions on construction will respect to open spaces, and as a means of locating and pinpointing areas worth preserving.

The "boundary" in this sense is characterized in the nationalplans in two main forms:

1. The first is the **boundary as a virtual line**, indicating the urban construction boundary or the boundary of the area to be preserved.
2. The second is **boundary as space**, buffer zone, or "intermediate region".

[49] Hough, Michael. *Out of the place, restoring identify to the regional landscape*, ,New Haven &London: Yale University Press, 1990. 1-5
[50] Hough , *out...,(1991), 179-213.*

2.1.1 Boundaries as a line

The planner, whose task it is to translate a planning policy into action, encounters numerous terms pertaining to "boundaries". There are the country's borders, there are municipal boundaries, and there are the planning site boundaries specific to each plan. By its very nature, a national plan is more comprehensive in its specifications. Such a plan does not address items pertaining to municipalities, local or regional councils, but proposees solutions to problems at the national level.

Throughout all of the plans, attempts were made to use lines to delimit, divide, and separate different areas. Boundaries were established to differentiate between developed areas and open areas, as well as between territorial features and other units. Such boundaries were virtual borderlines generally guided by the geographical and regional properties of a given area—such as vegetation, canyons, and the like.

The goal of the earliest plans was to organize the country into territorial units and to define each and every area. The founding concept is one of the most important components required to preserve a landscape, identify its uniqueness, and plan the nature and scope of its development. In practice, there is always a conflict between the ideology of construction and the importance of preserving the land.

The division of the country into landscape units with clear boundaries that conform to the topography already began in the Sharon Plan (p. 21). The Sharon Plan divided Israel into twenty-four planning districts[51] **(figure 1.8)**. The natural boundaries of each planning district were marked with a blue line. Each district constitutes an economically independent planning region with a city center consisting of the district's administrative, cultural, and economic institutions.

The boundaries of each planning district, as drafted in the plan, are an attempt to establish statutory, administrative boundaries that carry the "logic" of the region's natural topography. This approach is compatible with the approach that incorporates environmental values and outlooks in its perception of the city as a part of this

[51] A planning district is a geographical area with boundaries set according to geographic (drainage basins) and historical data, taking into account existing land distribution and traffic arteries. (figure 1.8, p.21)

environment. In this plan, the boundary did indeed symbolize a **virtual line** reflecting environmental logic, and it was the product of the requirements and dimensions of the cities located at its center. Tel- Aviv was given special emphasis, because in the absence of a clear boundary "*the city [was] liable to continue to spread endlessly and to include within its boundaries more and more agricultural land, until it completely engulf[ed] its agricultural environment*". [52]

Thus, this plan contained two boundaries as "virtual line" components:

1. The boundary of the physical region
2. The city boundary.

At this stage, the three concepts of "city", "open space", and "boundary" can be identified as three separate terms whereby the city and open spaces have a dimension and volume. There is also an undefined area between them that is meant to separate the two. Despite the virtual nature of the region's boundaries—since they were identified by means of geographical and topographical markers—they usually had a definition in the form of a wadi or a ridge.

Following up on the development of the urban continuum over the years and comparing it to the boundary definitions in this program of Sharon's reveals that the vast majority of the regional boundaries have remained as boundaries dividing one construction continuum from the next and have even merged into the outline of national open spaces due to the logic in their location and the values of nature they propound. "The sharp internal boundaries", however, whose aim was to divide the city and the green area dividing it, dissolved and for the most part, became a homogenous urban continuum.

In subsequent plans, one can see the continued attempt to divide the country into landscape units with marked boundaries. However, the objective behind setting these boundaries has changed since the Sharon Plan. Although these boundaries conform to the topography of the landscape, they do not constitute the boundaries of the urban areas. Their goal is to serve as a guideline for local and regional planning. These boundaries aid in the

[52] Sharon, Arieh. *Planning in Israel*. The Governmental printer, 1952. 70.(hebrew)

decision making process regarding construction and development, taking into account the value of the land (**figure 1.13**). They also serve as tools to guide the planner to derive inspiration from the natural landscape so that an abstract construction style on the area, is not imposed on the region.

The emphasis on setting a definitive, sharp, and final boundary line is discernible in the attempt to fix the limits of the metropolitan areas. In most cases, these boundaries are established on the basis of maintaining the status quo rather than on locating the topographical features of a given region as suggested in the Sharon Plan.

2.1.2 Separation Zone, boundaries as a space

This term, used for areas which function as separators, and which imply, by definition ,an attempt to solve the problem of urban continuance, repeats itself all along the planning process. While these boundaries change form, proportion, and image in the four National plans, from the very beginning of the planning process, thought was given to them, even when the land was mostly empty and the pressing problem was to deploy population to settle it.

The separation zones, initially associated with the center of the country, spread to almost all other parts of Israel. At an early stage, planners concerned themselves with the possible attraction of the central urban area of Tel-Aviv, which was liable to absorb its neighboring satellite towns and form a single, suffocating urban monster.

The tool that planners were going to use to prevent this kind of urban expansion was a series of dual-purpose green belt separators. In the Sharon Plan, these areas were meant to be mostly agricultural: "*these areas will remain destined for agricultural use, and its produce will supply the surrounding inhabitants*" (Arie Sharon). The Sharon Plan also stipulated that these separation areas be used as recreation grounds for the surrounding urban population by joining a complete system of parks, gardens, walk-ways, river banks, and other green areas **(figure 2.2)**.

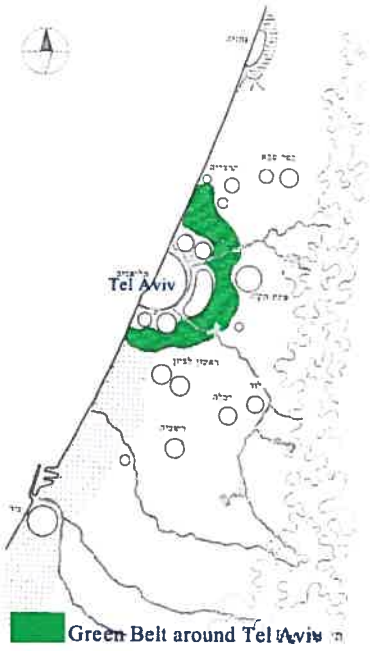

Fig 2.2: '***separation zone*** *surrounding each urban concentration... we propose a green belt that will fulfill several essential purposes of the urban concentration within its boundaries....Arieh Sharon*

(Source: Sharon, Arieh. *Planning in Israel*. The Governmental printer, 1952.70)

It is important to note that the Sharon Plan, with the exception of some green strips that do appear on the maps, does not include graphic descriptions of separation zones. Instead, it provides general directives for planners, mostly using the rivers of the central area as guidelines. The few separation zones existing in Israel at the time the plan was developed, and which provided for local needs (agriculturally, visually, and spiritually), had formed a pastoral utopia in which each town could be self-sustained and autonomous:

"*Just as a state population distribution plan set boundaries for the optimal growth of cities in general and the size of greater Tel Aviv in particular, there is a need to also set the boundaries of the area that will be put at the disposal of that population, since, in the absence of such a permanently and clearly defined area, the city is liable to continue to spread out endlessly and to include more and more extensive agricultural areas until its agricultural surrounding gets totally swallowed up ... Therefore a clear and permanent barrier to development must be set, in accordance with the general plan, in order to*

prevent the total urban assimilation of the municipal concentrations surrounding greater Tel Aviv".[53] "The clear barriers" that Sharon is referring to are the separation zones.

*"**As the separation zone** surrounding each urban area, we propose a green belt that will fulfill several essential purposes for the urban population within its boundaries. The terrain of the green belt will be primarily agricultural, and will even maintain this use as a source of agricultural produce for the urban population."*

This idea was a creative way to implement, Peter Rowe's, notion of a "middle landscape" meant to solve the problem of commercial strips extending into the surrounding countryside without a predetermined suggestion of design.[54]

The Sharon Plan tried to form a center of termination paradigms, which might be created to cope with the results of this kind of contemporary metropolitan area and its placeless ness and inhospitality.

Attempting to insert agricultural strips in the midst of districts clearly liable to become concentrated urban clusters far from the countryside was an effort to realize Rowe's "*Modern Pastoralism*". [55] These two contradicting terms allow some leeway for planners to interpret by emphasizing either the "modern", or (as was the case with the Sharon Plan) the historical "pastoral". In other words, taking this path in his planning weakens the modern technological part of Rowe's equation, towards the pastoral landscape stressing the emotional and historical symbols.

Panofsky (1957) and Preminger (1965) stated that "*far from being a realistic portrayal of actual country life, Pastoralism as an artistic and ideological motif seeks to transcend the ordinary by describing a far better world.*"[56]

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[53] Sharon, Arieh. *planning in Israel*, Israel Governmental printer, 1952

[54] Rowe Peter G. *Places and Poetics, from making a middle landscape,* the MIT press,Cambridge, Massachusetts. London, England *p.249-289*

[55] Rowe , *making*...,(1991), 249-289.

[56] Tunnard, Christopher and Pushkarev Boris. *Man –Made America: chaos or control.* Yale University Press, 1963.

During the eighteenth and early nineteenth centuries, the English countryside was transformed into an idealized pastoral settings for both old money and the *nouveau riche*. Yet again the pastoral design seems to have been chosen for its historical references. Simultaneously, it was also a way of masking the social realities of the industrial revolution and legitimizing the resulting individual accumulation of capital. [57]

Leo Marx states in the opening line of his classic work on the subject, *"the pastoral ideal has been used to define the meaning of America ever since the age of discovery, and it has not yet lost its hold upon the native imagination"*[58]. He distinguishes two kinds of Pastoralism:

1. **Popular and sentimental**
2. **Imaginative and complex**

The popular and sentimental version juxtaposes the ideal of rural life against the "*moral vice and depravity of the city*". Those who are close to nature and retreat into the "primitive self" are better people, happily insulated and sheltered from "big city life".

Rather than presenting a clear alternative or oppositional sentiment, **imaginative and complex** pastoralism strikes something of a dialectical relationship between the opposing forces of city and countryside. The term "nature", by contrast, is used far more comprehensively and loosely. Primarily, it refers to non-artifactual environments.

In view of this, it can be deduced that Sharon's pastoralism had elements of both the "garden city" and the desire to change the "conservative system of a densely developed urban continuity", an idea that would become paramount in the coming two decades. These two elements correspond with the outlook that a city's parameters must act as a balancing factor in the life of its inhabitants. Attaining this balance was associated with the notion that the "*population limits of the country are linked with the potential ability of agricultural growth*"[59] and was projected onto city life. Thus Sharon had created modern pastoralism.

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[57] Rowe , *making*...,(1991), 249-289

[58] Rowe Peter G. "Places and Poetics." In *making a middle landscape,* Cambridge&London: the MIT press, 1991. *249-289*

[59] Sharon, Arieh, *planning in Israel*, Israeli Government printer, 1952

The idea of the "Middle Landscape", at this stage of Israeli history, demonstrates a long-term, modern approach of taking into consideration, the values of the pastoral romantic approach that seeks to balance modern technological trends.

Figure 2.3:"*The terrain of the green belt will be primarily agricultural and will even maintain this use as a source of agricultural produce for the urban population*" from the Sharon Plan.

A similar concept of buffer zones within the built-up urban continuum found its expression several decades afterward, starting with national plan 31. In the instructions of "Israel 2020".

"Clear boundaries must be created between the built-up and open areas. It is at those boundaries that the contact and interaction occurs between them. The importance of the boundaries lies in their essence as **buffer zones** and obstacles against uncontrolled expansion... The contact area – the inner area of the open expanse, gave meaning and quality to the built-up areas' boundaries..." [60]

[60] Kaplan, Moti and Dayan Oren. *The open landscape system.* Introduction, part 1. Israel 2020 Master Plan for Israel in the 21st century, Technion-Israel Institute of Technology,Faculty of Architecture and Town Planning, Samuel Neaman Institute for Advanced Studies in Science and Technology, 1997. (Hebrew)

A directive such as this one suggests open spaces that will constitute an antithesis to an urban character by virtue of their nature and function, however - as pointed out previously and contrary to the Sharon plan which perceived these buffer zones as an important component on a local scale but not according to national criteria - in the last plans, the concept is that the land shortage is not only a local problem the central area, but a countrywide problem. This perception is relevant to both criteria:

1. According to the national criteria and the typology of regional open areas, these are called "*the intermediate spaces*" **(Figure 2.4):**

   As specified in the previous chapter, these regions separate the urbanized expanses and are highly accessible. They are open, large, and continuous. A similar concept was already suggested in national plan 31, which termed these areas "open rural landscapes", and was translated in national plan 35 into what was termed *"integrated preserve texture"*. The advantage of these areas lies in their proximity to urbanized expanses, the multitude of meeting points between them, and the frequent passage through them in the daily traffic between the urbanized expanses. Their importance lies in the fact that they offer the opportunity to combine the richness of natural landscape with a wide variety of leisure and recreation, beyond the fact that by virtue of their presence, they also constitute a "boundary space" and prevent metropolitan centers from fusing (**figure 2.4**).

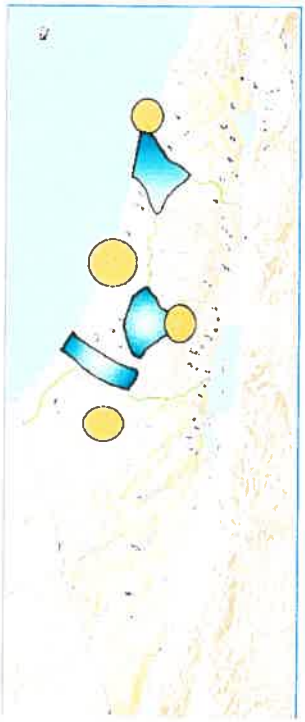

Figure 2.4: "The Intermediate Spaces", from the Israel 2020 Plan

(Source: *Land Resource in Israel, Development Policy and Principles planning.* presentation by Kaplan Moti, November 2003.)

2. According to regional criteria these areas are termed "*buffer zones*", and they function within urbanized expanses. They include linear axes with large and intermediate inner surfaces within urban areas. They were assigned a structural role in the creation of open expanses that delimit the developed regions and define their boundaries (**figure 2.5**).

Due to the shortage of open spaces, which is most clearly evident in the central region, the relevance of these areas lies not only in their essence as "boundary spaces" between the urban layouts, but also as open spaces featuring leisure areas which are readily accessible to the population. It should be indicated that the high density and integrated texture of settlements, roads, and infrastructure makes it difficult to establish a set and structured system of green buffer areas.

When examining the expression of these definitions in open space landscape we will find that many places that had once formed distant rural and agricultural terrains detached from cities began to be transformed into "sites" at the edge of the metropolis, beyond which development had begun to sprawl.[61]

The "middle landscape" turned Israel's landscape, since the pastoral vision of the Sharon Plan, from a functional rural terrain besides some park areas, - both serving the city at the time, into dedicated strips of minimal open area, sometimes - solely for conserving open space quality seen from passing cars or belvedere windows. Thos open space gained a singular value,

Figure 2.5: "Buffer Zone" From the *Israel 2020* Plan.

(Source: Kaplan, Moti and Dayan Oren. *The open landscape system.* Introduction, part 1. figure10. Israel 2020 Master Plan for Israel in the 21st century, Technion-Israel Institute of Technology,Faculty of Architecture and Town Planning, Samuel Neaman Institute for Advanced Studies in Science and Technology, 1997. 4.)

[61] Helphand, Kenneth. *Dreaming Gardens, landscape architect and the making of modern Israel.* The center for American Places Santa Fe, New Mexico, and Harrisonburg, Virginia in association with the University of Virginia Press, Charlottesville, 2002.164.

detached from its functional importance as a park, or a recreation area.

This transformation of open spaces tells the entire story. During "Sharon's era", the local landscape unique to each place was more pronounced at the city boundaries and reflected the different nature of each urban expanse. These expanses between the urban centers left the planner with a wide variety of creative options, leading to a design perception based on future thinking wherein the city would be enveloped in an "Israeli" landscape. This, in turn, was based on the thought that an "Israeli" landscape, in its agricultural sense, was strong enough to supply and resist urban forces.

The following questions resulted from this analysis:

What might be done to rid the "middle landscape" of its dislocated and inhospitable condition? What kind of design paradigms might be created to cope with the conditions of contemporary metropolitan areas? And what kind of ideology might be established to guide designs and provide a coherent source of inspiration? I will return to these questions in chapter 4.

2.2: urbanization:

Two interconnected aspects constitute the urban landscape, which developed in Israel. The first is the establishment and spread of cities. The second is the stimulation of the open areas that result from the first, and the matching of both built-up and open spaces to the specific sites where they were located.

As mentioned above, two key factors influenced the organization of national space:

1. The ideology and the policy at the core of the decisions that lead to the layout and the ratio between built-up areas and open spaces.
2. The land reserve—the more the land reserve dwindles, the more crucial the preservation of open spaces becomes. The latter is the factor that informs construction policy.

At the time the "Sharon" plan was drafted, Israel had abundant land reserves as well as an ideology and strategy based on the concept of the Zionist expanse. This concept was premised on sprawl and dispersal, and was therefore premised on avoiding dominant urban centers and monumental objects.

Ideologically, Zionism affiliated itself with the international garden-city movement. It fostered an agrarian, anti-urban and anti-bourgeois utopianism—at the center of which stood the productive, land-laboring "new Jew." Strategically, concentration and crowding were perceived as exilic, anti-pioneering trends that would result in the loss of the land. Categorically, the plan's approach preferred horizontal, sparse, low-to-the-ground construction. This master plan outlined the establishment of hundreds of rural communities and 29 new regional centers in an attempt to avoid overcrowding and to moderate the development of "huge crowded metropolises." Needless to say, the Sharon plan also objected to vertical construction, concentration, and crowding—the three principles upon which most of the following master plans for Israel would be based.

If so, what is the cities' landscape that has derived from these two distinct concepts? What has been added and what has changed over the years?

2.2.1 Garden City

The idea of the Garden City in Tel Aviv, (which had accelerated in the country since the nineteenth century), reached its climax with Sharon's plan. Sharon describes his plan for new cities or those which are intended for expansion: *The structure and plans prepared for the new towns were based on divisions into neighborhood units, which differ from the conservative town-planning methods hitherto employed in European towns as well as those of Israel. The basic principle adopted was to divide the new towns into a number of neighborhood units, each to serve as a self–sufficient entity, supplying its residents with all their needs in the most efficient fashion...the size of the neighborhood unit varies...the most important of which will be the capacity of the school, the optimum size of a good local civic and shopping center, and the length of the roads within the neighborhood units. The plan aims at keeping superfluous and dangerous traffic well away from the boundaries of the neighborhood units' and allowing the residents of the unit easy access by foot"*

Figure 2.6 : top:Rothschild Boulevard in 1912 ,Tel aviv. bottom: Rothschild Boulevard in 2000, Tel Aviv.Israel

(Source: Helphand, Kenneth. *Dreaming Gardens, landscape architect and the making of modern Israel.* The center for American Places Santa Fe, New Mexico, and Harrisonburg, Virginia in association with the University of Virginia Press, Charlottesville, 2002.163)

If so, then Sharon aspired to create a concept of a garden city that will match the morphology of each and every district. As described earlier, this concept both matched the policy of "dispersion" popular among planners, as well as the modern urban planning that was globally widespread at the time according to Ebenezer Howard's 'Garden Cities and Movements.'

Sharon's plan was a sweeping and inclusive concept for all cities, even if such structures did not fit the climate and character of that area.

A sharper distinction between the adaptability of the concept of the Garden City and its implementation can be achieved by comparing Tel Aviv to the city of Beer Sheva. In the former city, the Garden City concept created a strong structure of open areas which functions until this day. In the latter city, the Garden City model has failed due to its incompatibility with the desert climate. Such incompatibility has created wide areas of desolation and inefficiency, due to the bleakness of the open areas.

Tel Aviv:

Elements of Garden City inspired plans for Tel Aviv by Kaufman (1921) and Petrick Geddes (1925). Both plans deferred to Tel Aviv's fine seaside situation with strong east-west axes linking the city and sea. In Kaufman's plan, a promenade paralleled the seashore with a Garden City behind. Geddes's plan envisioned urban blocks linked by pedestrian ways that he imagined covered with roses and vines.

East-west links were strengthened by planted boulevards, which also connected districts.[62] Geddes's attention to ascending scales of open space was most critical, connecting each dwelling to open space and creating movement to block, district, and city.

Figure 2.7: Yarkon Park, in the north of Tel Aviv,Israel.

(Source: Helphand, *Dreaming*... (2002).96)

Figure 2.8 drawing of the plan for the Yarkon River, Tel Aviv Israel water shade (1996).

(Source: Helphand, Dreaming... ,(2002) .165)

[62] Helphand, Kenneth. *Dreaming Gardens, landscape architect and the making of modern Israel.* The center for American Places Santa Fe, New Mexico, and Harrisonburg, Virginia in association with the University of Virginia Press, Charlottesville, 2002.165.

The plan recognized the primacy of the waterfront. It recognized the Yarkon River as an amenity and a boundary, and further recognized that green connections to the sea and the boulevard both defined areas and afforded connectivity.

The influence of the Garden City's concept on the landscape of Tel Aviv not only includes pivoted open areas in the local neighborhoods but also includes the creation of links to parks, which were considered "a space border" (p.55). One such example is the Yarkon Park, (**figure 2.7. 2.8**) which originally was the northern border of Tel Aviv. It has become the city's "central park" and now serves the metropolitan region. Yarkon Park offers a good example of the spectrum of urban park functions, demonstrated by its utility for those who live along its substantial borders.

Beer-Sheva:

In southern cities such as Beer Sheva, (located in the Negev desert) the structure of a Garden City, (as suggested in the Sharon plan), created desolate open spaces. The city expanded and included homogeneous architecture and many open spaces. As mentioned, the structure of the Garden City in Tel Aviv shielded the skeleton of the open areas. In the southern part of the country, however, the structure blurred the open area system and created a limited landscape. In the State of Israel, this landscape is a wasteful system of open areas. Because of the desert climate and the character of the population, open areas become neglected and the natural landscape loses its original beauty. **(Figure 2.9)**

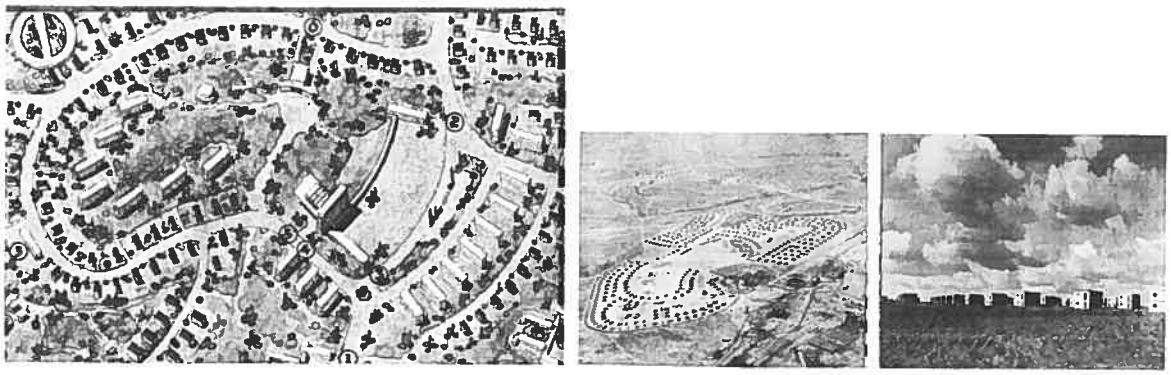

Figure 2.9:
Beer Sheva – A first neighborhood of new Beer Sheva is located north of the existing city of Beer Sheva... In a photograph taken in the stage of construction one can see the free structure of the roads, which fits the topography. The free areas in the center of the unit are designated for community and public buildings and for green areas connecting the residential area with the communal center.
(Source: Sharon, Arieh. *Planning in Israel.* The Governmental printer, 1952.xxviii,xxix)

The Israeli elite of the fifties identified itself with modernistic progress. The nature of modernism is that it negates the personal story and leaves no room for past traces.[63] In spite of good intentions, the citizens of Beer Sheva, Ofakim, Shderot and Netivot (the southern cities) illustrate the accumulating influence of life in a place which has no uniqueness, where "one travels from one city to another [and] can make no distinction between them." The prevailing feeling if one of ugliness, of "beauty which is always found someplace else but not here"...[64]

As mass immigration leveled off toward the end of the 1950s, the Israeli economy grew rapidly, leading to the rise of a more prosperous class. At this time, Israel opted to change its image from that of a "developing" country to that of a "developed" country. Israel's aspiration to follow cosmopolitan trends and adopt a fashionable appearance found an expression in public discussions pertaining to both the option of building upwards and also to the option of inviting well-known international experts—including architects—to Israel.

In March 1964, the famed Brazilian architect Oscar Niemeyer arrived in Israel. An avowed communist, Niemeyer exiled himself from Brazil following a military coup and resided in Israel for 6 months. During this time, he was involved in planning a dozen private, commercial, municipal, and governmental projects throughout the country. Niemeyer recorded his impression of the socialist Zionist enterprise and Israel's natural scenery in his diary. He wrote:

> *Israel must be built upwards and its cities planned vertically—something that will be appreciated in the future and will conserve the land (...) Israel is developing as such a rate that low-rise construction is unthinkable, for in no time a territory as small as this will be disproportionately covered with low buildings, denying it its*

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[63] Tovia, Miriam. *Binyan Ha'arez, public housing in the 1950s.* By Miriam Tovia & Michael Boneh. Israel:Hkibuz Hameuhad Press, 1999. 7-10, 60-76 (Hebrew)

[64] Gur, Batia. *Leftward from the starvation road.* Jerusalem: Keter, 1990.(Hebrew)

beautiful nature and views, and leaving it without open spaces essential to its development. Low-rise construction sees not what it begets. [65]

Niemeyer created new proposals for Beer-Sheva, a city in the Negev. He advanced it as a utopian-conceptual plan without a specific site. His ideal city would include 30-40 story skyscrapers, and was described as "*a new kind of metropolitan kibbutz that has grown, expanded and modernized without losing any of its human qualities, solidarity, and idealism*".

Niemeyer's Negev city embodies his critique of the planning conceptions that transplanted the Garden City to the desert—a sparseness born of another cultural climate altogether. Niemeyer was asked to compare his scheme to the construction plans of Beer Sheva's new neighborhoods and Eilat, and to weigh the advantages of vertical planning in remote areas as a general trend that would spare land reserves and avoid wasting infrastructure and resources.

Niemeyer's ideas were perceived as radical and fanciful in Israel of the 1960s. Not only were they foreign to the provincial, peripheral character of the Israeli city, but they also threatened the official rhetoric of the welfare state and the petit-bourgeois lifestyle of its citizens. Of all places, "modernist" Israel retreated in the face of Niemeyer's monumental, iconographic, mannerist, and flashy modernism.

Niemeyer's proposals were never implemented in Israel. In practice, not one of his structures was erected. Yet, although his ideas were at one time dismissed, they reemerged in the 1990s, a result of both Israel's accelerated population growth as well as increased preoccupation with Israel's capacity to bear its own weight in the future. Thus, the plan drafted of Israel 2020, proposes concentrated and crowded development, abstention from the establishment of new settlements, and increased population density in the existing urban centers.

[65] Elhyani, Zvi. "Oscar Niemeyer and Israel's Height Dilemma", In *Borderline disorder* . Zvi Efrat . the Israeli pavilion, The International Architecture Exhibition, La Biennale de Venezia, , 2002. 52-54.

2.2.2 Green lungs

Although great historical, political and social differences exist between all countries of the world, they are similar insofar as they share basic assumptions of their modern national planning, (starting in the nineties), especially in the ladder of cultural values.[66] Here, the increased emphasis and value placed upon landscape and nature is demonstrated in the national order of preference. This cultural change is in part due to increased awareness of the non-reversible damages caused to the natural environment by unguarded human activity. It also reflects sustainable development targets which will enable future generations to enjoy the planet's resources, including its natural landscape and biological richness.

As a result, leisure time spent in open green areas has increased. Open areas are not merely regarded as a barrier to urban expansion or a reserve of agricultural land. Instead, they are perceived as an active ingredient of central importance to the life of an urban population.

In Israel, the threat that the central part of the country will become a continuous urban territory that prohibits both green breaks and intervals along with connecting lines between the built and open has lead to a ideology contrary to that of the expanding Garden City. This new outlook has led to urban planning that emphasizes the individuality of each city's identity and image, and delimits clear contour lines that separate them from their neighborhoods. Hence, "open space" is emphasized, and has become the dominant factor which influences the design of the built space.

This appears in the summary of the document of Plan 2020. Plan 2020 exhibits the principal of the green heart, and thus answers the requisite for a qualitative and accessible open space in the centre of the urban space. In the language of the plan:

> *Maintaining a large open continuity in the heart of the urban space highly accessible to its population, cultivating the green heart as an open qualitative*

[66] Jellicoe, Geoffrey and Susan. *The Landscape of man, shaping the environment from prehistory to the present day* , London:Thames&Hudson Ltd, 1995. 287-398.

centrally located in that space utilizing the encircling resources and ensuring accessibility to it from all surrounding settlements."[67]

The principal is thus one which combines barriers that break the continuity of built territories while at the same time protecting and maintaining the value of the natural landscape. Such barriers include river mandrels as well as the preservation of agricultural land.

The density of built cities concentrated in the center of the country, including the Tel Aviv metropolis suggests a model of urban branches and green fingers "*...which gives the center area—and especially Tel Aviv and suburbs a structure of urban branches spread into open agricultural land. In this way, green fingers close to most river beds penetrate deep into the urban formations with a high surface, creating maximum contact between the open and the built.*[67]

The principal of creating green lungs in centers of urban density was, in the center of the country, a result of land shortage.

In the Negev in general and **Beer Sheva** in particular, the aforementioned Garden City plan of the fifties did not fit the desert city. Urban sprawl and suburbanization over a large area resulted in increased prices for infrastructure construction—water supply, sewage treatment, electricity and roads. In the desert climate, conditions made it difficult to develop garden areas and vegetation between the suburbs, and these areas remained parched, thus increasing the feeling of desolation.

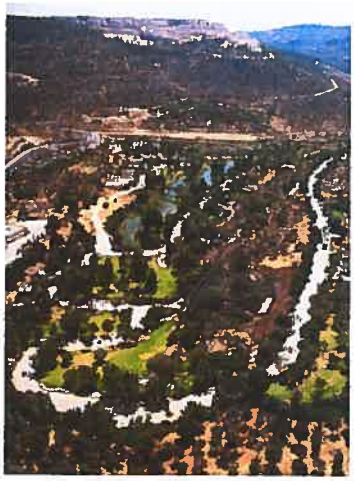

Figure 2.10: The picture shows Botanical Garden (1979) Jerusalem. (Shlomo Aronson). The Botanical garden fills the wadi adjacent to Hebrew University.

(Source: Helphand,Dreaming... ,(2002) .183)

Figure 2.10: The principle of density and creation of a green lung in beer sheva, Beer Sheva River Park Israel

(Source: www.boker.org.il/.../desert_bi king/ beersheva.htm)

[67] Kaplan, Moti and Dayan Oren. *The open landscape system.* Introduction, part 1. Israel 2020 Master Plan for Israel in the 21st century, Technion-Israel Institute of Technology,Faculty of Architecture and Town Planning, Samuel Neaman Institute for Advanced Studies in Science and Technology, 1997. (Hebrew)

suburbs, and these areas remained parched, thus increasing
the feeling of desolation.
The purpose of the planning concept in the southern region is to develop Beer Sheva as the capital of the Negev, and as a central metropolis.
This principal aims to increase construction density and solidify all parts of the city, resulting in an urban construction plan that is better suited to the desert landscape and climate. As part of the green lungs idea, the Beer Sheva River will be developed into the landscape spine of the urban area in general and of the metropolis.

From a national and regional standpoint, solidifying Beer Sheva would on one hand strengthen the city and fit it to the conditions of the area, and on the other, would conserve the centre of the Negev and its south as an open area, and thus preserve the natural landscape that constitutes the main continuous open area in Israel.

In summary, in a dense construction system such as that of Israel, the "boundary" becomes the "heart" and the "heart" constitutes the "boundary." Both should supply these green lungs that are so essential to the existence of viable urban space. As a "boundary," it strengthens its structure and gives it its identity, and as the "heart", it gives it its life.

The next chapter traces the application of national planning principals in these critical issues, and attempt todiscovers the hidden landscapes behind them. Through the case study of the "Ayalon Park," an attempt will be made to understand the following questions: How does the border become the heart? Why have national planning principals left the park an open area in the midst of a densely constructed area? And finally, what are the planning ingredients that will preserve its uniqueness and supply the inhabitants of Israel's most densely settled metropolis with access to a haven which is, in this case, the "last" remaining landscape?

CHAPTER III
Case Study: Ayalon Park - "The Last Landscape"

Israel's national and regional planning aim to design the future landscape of the State of Israel and also to create the necessary balance between urban and open areas. Two critical subjects are entwined in this national and regional planning:

1. **The boundary** between constructed areas and open areas is a dominant element in the creation of a border.
2. **The Green Lungs**, which provide the urban territories with the cultural, environmental and ecological qualities so necessary for its existence.

When the landscapes of open areas in the dense and constructed Israeli space are analyzed, those two subjects merge into one entity. To focus on these subjects and to examine the application of the principals of National Planning in a concrete location, "Ayalon Park", which is the "last" landscape remaining in the central district of Israel, has been choosen.

Ayalon Park is a wide plane in the center of the most densely constructed area in the State of Israel—the heart of the Tel Aviv metropolitan area. The project is located on the outskirts of Tel Aviv and serves as its main gateway. As such, it serves as the southern border that separates Tel Aviv from its neighboring cities, and as the heart of the entire metropolitan area (Figure 3.2). Such a space presents a unique opportunity to conserve a "green lung"for the metropolitan area The park is located on the crossroad of two important highways which cross the country and connect its largest metropolises.

Ayalon Park is a sort of "last chance" for a substantial open area in the densely populated central section of the country. Its high development potential stems from its location, availability and high accessibility as well as from the vital need to ensure areas for leisure and recreation for a densely populated urban area. At present, plans for a regional park are being finalized and are currently available for public comments. Detailed plans have yet to be started.

This chapter will follow the circumstances, which led to leaving this area undeveloped. It will also deal with the influence of national plans on its conservation and landscape design. Finally, it also explore questions pertaining to the ways in which definitions of "boundary space," "open landscape area," and "green lungs" are translated from definitions into a material landscape.

Figure 3.1: Ayalon Park, the Site.

(Source :Israel Municipalities Organization ,
Dan Block, to sanitation.
www.hiriya.co.il/hiriya/subs.asp)

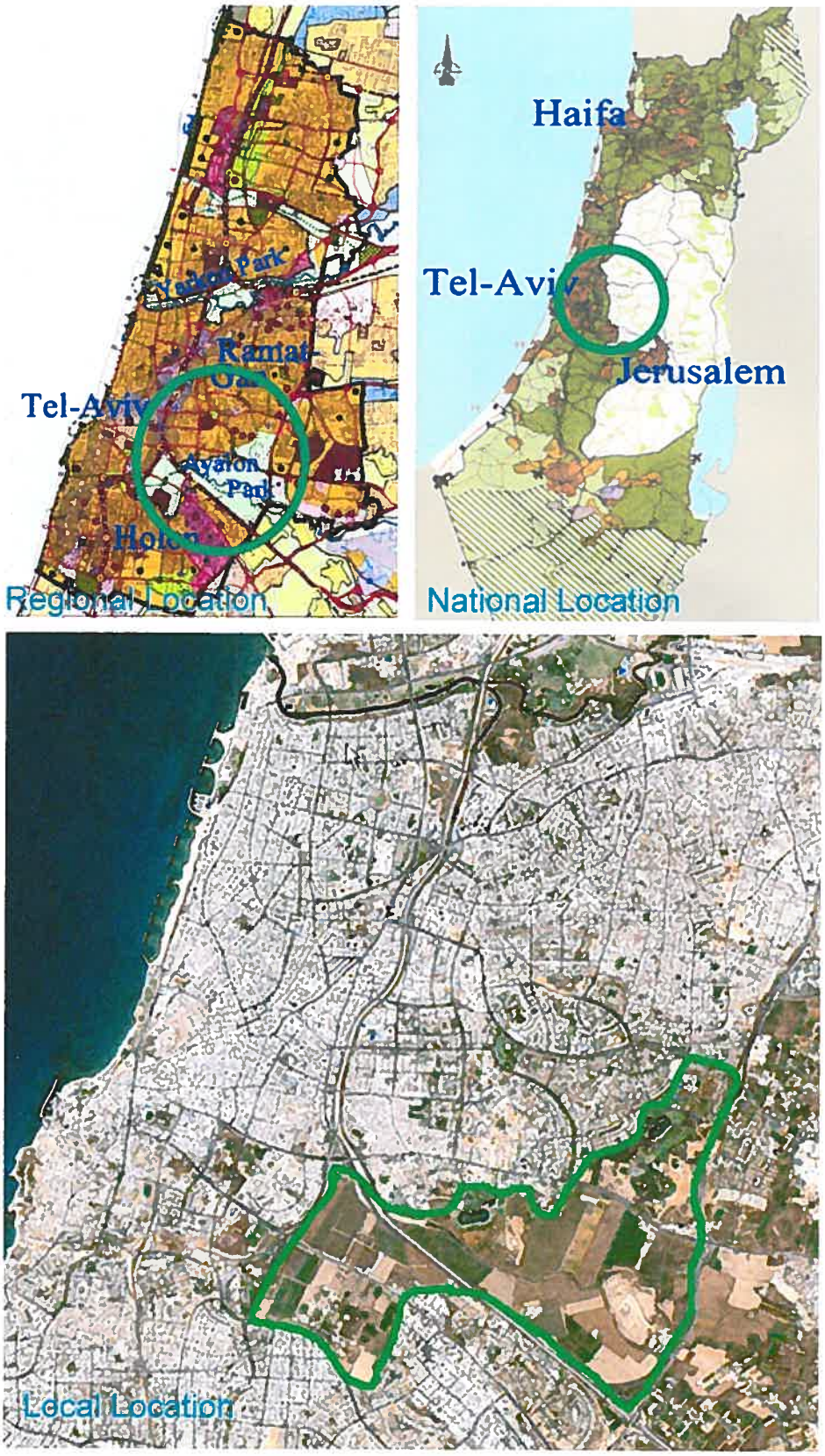

Figure 3.2: Ayalon Park Location

(Source:Top left: Tel Aviv-Jafa Regional Master Plan, *Land Use Plan* (TAMAM 5).Top right: *Israel 2020 Master Plan for Israel in the 21st Century,* Technion-Israel Institute of Technology,Faculty of Architecture and Town Planning, Samuel Neaman Institute for Advanced Studies in Science and Technology, 1997. bottom: Cubed Information Integration and imaging LLC, middle east 15 m Landsat <www.i3.com/products/ iraq.htm>)

3.1 Description of the site.

The planned site of Ayalon Park spans an area of over 8,000 dunam. It is located in the heart of Tel Aviv, the country's most densely populated metropolis—a vast urban stretch between the Mediterranean Sea and Jerusalem. The project is located on the border between Tel Aviv and neighboring Holon, Ramat Gan and Or Yehuda.

The park derives its name from the Ayalon stream running through its center. The Ayalon stream is a seasonal stream that drains rain water and occasionally causes floods.

The area is bound in the east and in the south by two national freeways (**Figure 3.3**). Highway 4 (Geha Road) stretches from the north of the country to the south and Highway 1 (Tel Aviv-Jerusalem road) stretches from west to east. Both highways intersect at the southeast corner of the park. From a motor traffic point of view, this is the centre point of the entire country.

The urban area surrounding the park is adjacent to the southern quarters of Tel Aviv—the quarters of Holon, Ramat Gan and Or Yehuda. These quarters are less favored and none have an open area that is similar in scope to the Yarkon Park on the northern side of Tel Aviv (**Figure 3.1**).

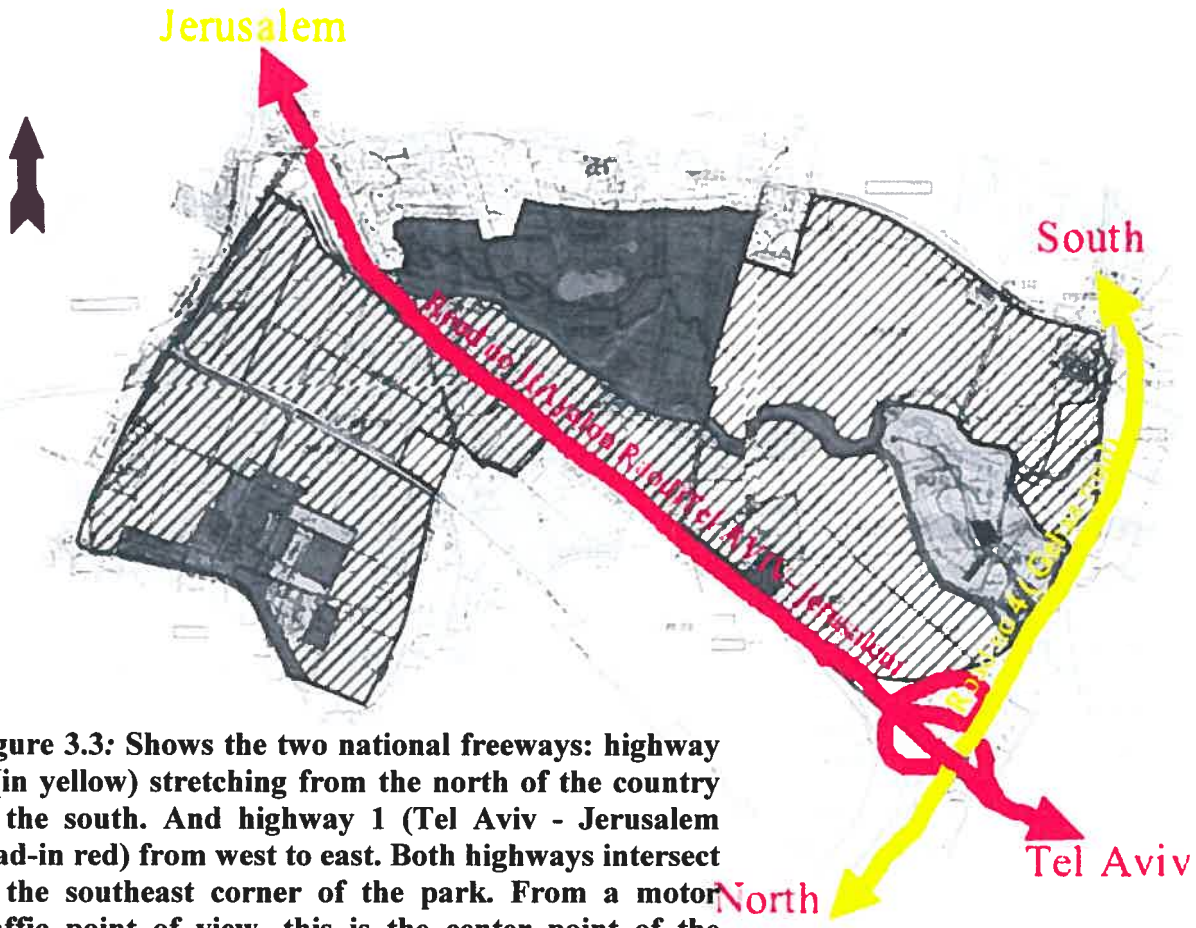

Figure 3.3: Shows the two national freeways: highway 4 (in yellow) stretching from the north of the country to the south. And highway 1 (Tel Aviv - Jerusalem road-in red) from west to east. Both highways intersect at the southeast corner of the park. From a motor traffic point of view, this is the center point of the entire country.

(Source: by the author,based on *traffic appendix ,1:5000* in Plasner Architects, Gogenhaim-Bloch, Kaplan Moti. *Ayalon Park, TAMA 5.3- Regional Master Plan 5.3 ,report no 5.* Israel Ministry of interior, ministry of housing&construction, Israel land authority, may 1999.)

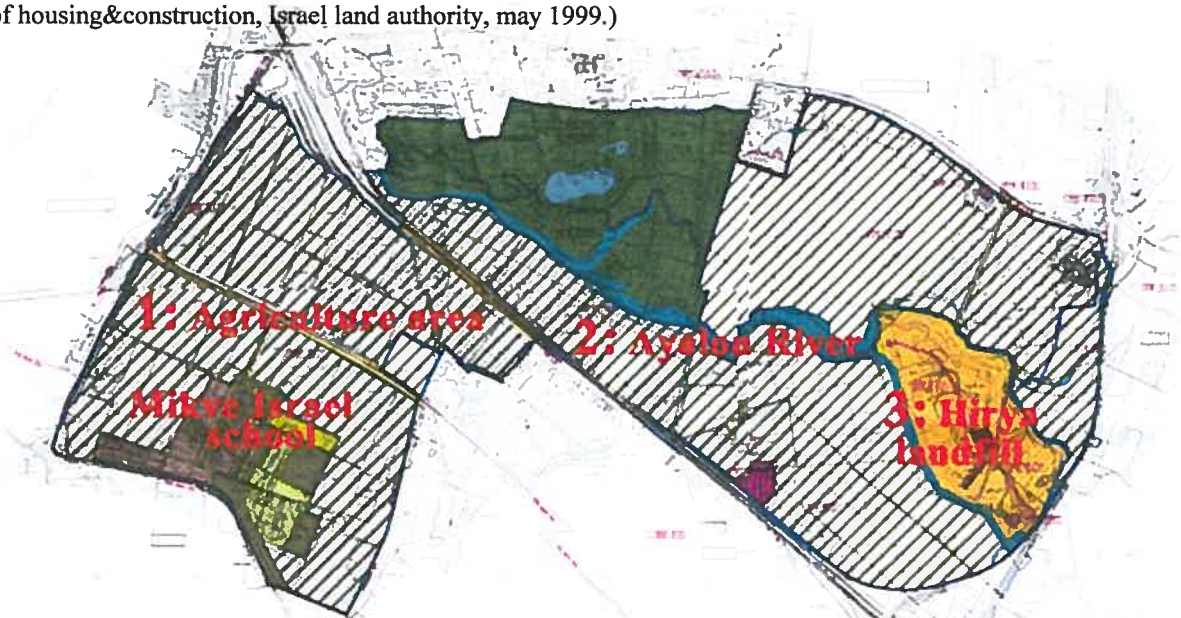

Figure 3.4: *shows the three distinct and dominant landscapes in the site:*
1-agriculture area belonging to Mikve Israel school.
2- Ayalon River.
3-Hiriya Landfill.

(Source: by the author, based on *Park Ayalon –Regional Master Plan no 5/3, 1:5000.* In Plasner Architects, Gogenhaim-Bloch, Kaplan Moti. *Ayalon Park, TAMA 5.3- Regional Master Plan 5.3 ,report no 5.* Israel Ministry of interior, ministry of housing&construction, Israel land authority, may 1999.)

The planned area has three distinct and dominant landscapes:**(Figure 3.4)**

1. The agricultural area belonging to Mikve Israel school,
2. The Ayalon River.
3. The Hiriya Landfill.

3.1.1 Agricultural land (Figure 3.5)

The Agricultural land encompasses an area of some 3,000 dunam south of Highway 1 (the road from Tel Aviv to Jerusalem) and includes buildings and land belonging to the agriculture school Mikveh Israel.

Fig 3.5:
Ayalon Park- the Agriculture District.

The "Kol Israel Haverim" fellowship initiated, constructed and managed the Mikveh Israel School, which was founded in 1870. With the establishment of the State of Israel, the "Alliance" has added the state as an owner of some 3,300 dunam. The land was previously signed over to Kol Israel Haverim for a 200 year lease.

A secondary lease was signed the land in favor of the Mikveh Israel School Company for the same amount of time. The area also includes agricultural land subleased from the Israel Land authority, and several tenants cultivate the land.

The value of the agricultural resources is, in this case, not necessarily an economic value, but is rather a visual, social and landscape value—agricultural resources contribute to the texture of life and view of the area. Mixing an agricultural area in the regional structure and keeping traditional agricultural landscapes are important elements in the planing policy of many western countries.[75]

[75] Plasner Architects ,Gogenhaim-Bloch, Kaplan Moti. *Ayalon Park, Description and analysis of existing situation, Report no 1* .Ministry of interior, ministry of housing&construction, Israel land authority, August 1998. (Hebrew)

3.1.2 Mikve Israel Agricultural School, Historic background (figure 3.6)

The Mikveh Israel Agricultural School was established in 1870 by Carl Neter. Neter was an emissary of the "Kol Israel Haverim Alliance in Paris. The school aimed to teach Jewish children land cultivating skills that would be used to improve the condition of Jews living in the land of Israel. By doing this, Neter aimed to increase the productivity of the Jewish settlement, develop the natural resources of the country and return to the glory of agriculture.[76] The Turkish ruler allocated an area for the school of about 3,000 dunam on both sides of the road from Jaffa to Jerusalem.

Fig 3.6: Mikve Israel - Agricultural School

(Source: The Society for the Restoration &Preservation of historic sites in Israel. <http://www.shimur.co.il/english/index-e.html>)

The land was intended to serve as the base for a mixed, diversified agricultural farm upon which the pupils would be able to specialize in their field of study via practice. Over the years, the farm was also used for research purposes. The teachers of the school performed a variety of experiments and the school served as a centre for teaching, coaching and demonstration.

Throughout its existence, thousands of students studied at the school. Many students were children of immigrants that were uprooted from their homes and families during riots and wars. In the school, they found a warm and friendly home. The educational staff specialized in absorbing immigrant children, and soon the living quarters turned from sleeping barracks into pleasant dormitories. Thousands of graduates found key positions in many settlements; they are now spread over hundreds of agricultural settlements, research institutions and farm industries.

Prior to the establishment of the State of Israel, the school also served as a training and exercise center for the "Hagana" organization. The schoolteachers took part in all of Israel's wars, and self-defense and security education was a key part of the value system cultivated by the school.

[76] The Society for the Restoration &Preservation of historic sites in Israel. <http://www.shimur.co.il/english/index-e.html>

3.1.2.Ayalon Stream (Figure 3.7)

The Ayalon Stream flows through the center of the project, and will potentially form the central axis of the planned park. This area of the park has been preserved since the British Mandate period, as it forms a flood area for the stream. For this reason, no construction occurred in this area, and it remained outside the municipal borders of the townships around it.[77]

Fig 3.7:Ayalon Stream,Ayalon Park, Israel

(Source :Israel Municipalities Organization , Dan Region,to sanitation < www.hiriya.co.il/ hiriya/subs.asp>)

The Ayalon Stream is a seasonal stream which has a tendency to flood. It winds in flat clay soil. Such winding is rare among the shore streams and has both spatial as well as landscape importance.

Compared with a stream that has a straight axis, such winding increases the contact and surface area of the stream with its vicinity, and creates a rich and diverse surrounding.

The centre part of the stream flows in an open area of the project. Sewerage in various states of purification is continuously spilled here, so that in reality, this area is an open sewage canal. Such spillage may stop in a few years, pending the completion of various plans for sewage treatment. The treated water may serve to irrigate the park.

[77] Asif, Architectectes. *Ayalon Park, Plan's background.* The Israeli Lands Administartion, September 1996.(Hebrew)

3.1.4 Hiriya Landfill (Figure 3.8):

To the residents of Israel, the Hiriya Landfill is a prominent and well-known landmark. Since 1952, most of the waste of the central region of Israel has been land filled at the Hiriya site. 16 million m^3 of waste (and soil cover) have been piled up on this steep mountain, which rises about 60 m. above the environment and spans an area of about 500 dunam. Hiriya is one of the largest landfills in the world.[78]

Fig 3.8: Hiriya Landfill, Ayalon Park, Israel.

(Source: Edge Consultants UK LTD, *edge in Israel*< www.edgeconsultants.co.uk/ Israel.html>)

The landfill is characterized by its geometrical shape—it appears as a table mountain with steep slopes descending into the Ayalon and Shaphirim Rivers.

The summit of the landfill offers an impressive panoramic view of the entire southern part of the Dan Region, particularly of the skyline of Tel Aviv and Ramat Gan. From afar, Hiriya is clearly visible in this flat landscape. At present, the landfill leaves the impression of neglect and grave damage to the environment.[79]

In 1998, Hiriya was finally closed to further landfill, since it posed a real danger to planes landing at the nearby Ben-Gurion International Airport. The landfill is almost completely devoid of vegetation, due to a high concentration of bio-gas that results from decomposing organic waste.

Planners envision transforming the Hiriya Landfill from a environmentally hazardous locale with an extremely negative image into the heart of Ayalon Park. Because of its special geometric shape and the possibility of restoring the area via re-vegetation,

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[78] SCS Engineers, TAHAL Consulting engineers Ltd, Arch.Ulrik Plesner, Arch. Maya Plesner, Prof. Peter Latz, landscape architect Munich, Germany,Arch.Amos Brandeis. *Rehabilitation of Hiriya landfill as part of Ayalon park*, the engineering and architectural landscaping team-report no 3- side slopes of the landfill and summary of previous planning stages, based on the team workshop, December 2002. (Hebrew)

[79] Ayalon Park, *Plan's background.*, Asif Architectur &Urban Planning,The Israeli Lands Administartion. Sep 1996

Hiriya can be transformed into a major landmark, which, from the perspective of landscape development, forms part of the park planned around it.

In conclusion, the *Mikve-Israel* School and the Hiriya Landfill may be said to be the poles of the park. The former symbolizes healthy, manmade agriculture, while the latter stands as a symbol of an ailing environment created by man—an environment that is polluted and neglected. The first represents a seeding and blossoming beginning of life cycle, while the second represents waste and sewage, edge or end of life.

Symbolically, the park makes an attempt to reconcile the two poles and harmonize them into one entity through healing both the Hiriya landfill as well as the water system of the Ayalon stream.

Physically, the park serves as the border between three large cities in the Dan block. Furthermore, by being "the last landscape" in the urban continuity, the park attempts to preserve, restore and create a landscape that is visible and accessible. The presence of this landscape will connect major cities as well as act as a green lung that will prevent urban encroachment.

3.2 General Historic review:

The allocation of 8,000 dunams (10,000m²) for use as a green lung—a space of leisure and recreation—in the heart of the most desirable and expensive area in Israel is an important historic event. The allocation of this area for a park is linked to movements in the 18th and 19th centuries to build parks—movements, which transformed the urban fabric of many western cities. The following review briefly discusses the history of some of the large park constructed in the cities of Europe and North America as both a background and as a physical, social and philosophical connection to the current plan, for Ayalon Park.

I will concentrate on three examples: Mount Royal Park in Montreal, Central Park in New York and Bois de Boulogne in Paris.

3.2.1 The Municipal Park Movement

The Municipal Park Movement was iniiated in Western Europe and the United States at the beginning of the 19th century, through the middle of that century, and until its end. The movement was dynamic in Britain, France and Germany, and later on in the USA. It promoted the development of large green public areas, nearby or inside large cities. In these countries, the movement was supported by important public figures such as politicians and business men, and promoted by journalists and landscape architects. They found both social and political meaning in the establishment of urban parks that would be universally accessible and that would supply calm leisure, health and shelter from the city's hustle.

The size of the parks built by this movement was quite large. 500 acres (2,000 dunam) was considered reasonable. For the construction of Central Park in New York, a size of 160 acres was first suggested. This area was rejected by various public delegates who demanded a minimal park size of 500 acres. They felt this amount of space could supply the feeling of being away from the city, of "getting lost" in a natural country landscape.

The urban parks movement was one of the counter-reactions to the industrial revolution. It attempted to mitigate some of the negative results of the movement. Such results, especially in Western Europe, included the creation of overcrowded and poverty-stricken neighborhoods, and housing tenements which precluded open areas. Such conditions contrasted with the circumstances of the wealthy class, which continued to enjoy the large mansions and closed gardens that they nurtured in the cities.

Caring for the lower classes was one of the basic principals of the Municipal Park Movement. Other principals included the following[67]:

1. Movement and exercise in the open air is essential for good health. Urban parks serve as places were such exercise could take place freely.
2. The urban park serves as a playground as well as a place for relaxation. As such it fulfills significant psychological functions.
3. The park contributes to the beauty of the city. One of the repeated justifications advocated by park supporters is that a large park enhances the image of the city.
4. Politically, the municipal government is responsible for supplying open spaces throughout the city for the well being of all of its citizens, independent of socio-economic status.
5. The existence of public gardens is a democratic principle. Such spaces should be open to all, recognizing no difference in social status. This is a basic requirement for modern democratic life. Downing, a landscape architect and a leading supporter of creating Central Park in New York, pointed out that the Germany of the 19th century was a more democratic country then the US, since in Germany one could find large public parks, while in the US no such parks could be found.
6. The beginning of a developmental grasp which supports maintaining open spaces for future generations. In 1839, the British governor of the city of Wellington, New Zealand was requested to plan urban parks intended to supply the needs of

[67] Plasner Architects ,Gogenhaim-Bloch, Kaplan Moti. *Ayalon Park, Description and analysis of existing situation, Report no 1* .Ministry of interior, ministry of housing&construction, Israel land authority, August 1998. (Hebrew)

future generations: "*Provide for the future rather than the present...the beautiful appearance of the future city is to be secured.*"

3.2.2 Central Park New York

In the USA, the Municipal Park Movement started its operations in the 1850s. Upon returning from a tour of Europe, the landscape architect Andrew Jackson Downing brought with him the enunciation of the public parks. In his paper "The Horticulturist," he published a series of articles that supported the establishment of large urban parks in US cities. During that period, the cities in the northern United States suffered from a severe shortage of public open spaces. Although European settlers had brought with them principles of urban planning that included urban open spaces, these intentions were in most cases lost, due to economic pressures and the rise in real estate value.[68]

Figure 3.3.1 :Central Park New-York- the first landscaped public park in the United States.

(Source: Lovinger ,Ron. *Understanding Landscape/The Landscape as public garden /the English romantic gardrn made public and French-New-York*< www.uoregon.edu/~la260/ publicgarden.html>)

A noticeable example is the city of New York. In the old center of New Amsterdam (lower Manhattan of today), no open areas were allocated for public purposes. The buildings were crowded and the streets narrow and dark. At the edge of the settlement an open space was defined; it was known as "The Fields" and it was used as a "Common."

The city plan from 1807 included eight areas allocated for public parks. These allocations totaled 450 acres. The people who prepared the plan apologized for the

[68] Olmsted, F. L. Jr. Kimball, T. Forty Years of Landscape Architecture : Professional Papers of Frederick Law Olmsted - Vol. 2: Central Park The MIT Press, 1973.

limited open spaces intended for public use as compared to the number of inhabitants expected, but reasoned this limited allocation by the high prices of land in the city and by the ocean view surrounding Manhattan (thus serving part of the relaxation and leisure functions). In spite of this, in 1838 the net area of the existing parks in Manhattan was cut back to only 120 acres. Lacking public gardens, the population began to use cemeteries for walks and recreation.

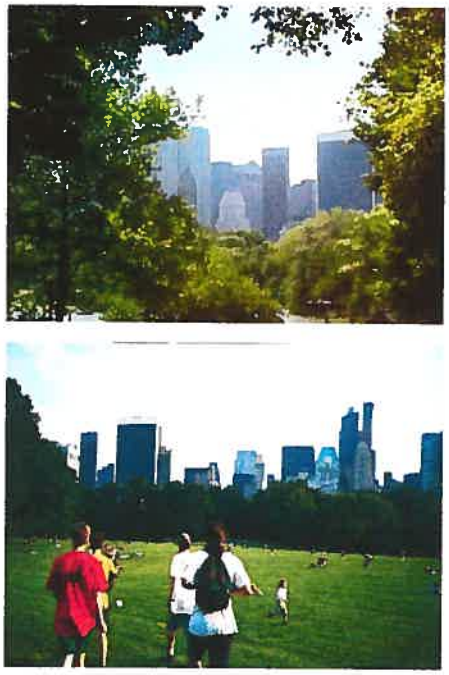

Figure 3.3.2 :Central Park NewYork-The designers sought to create a pastoral landscape in the English romantic tradition.

From the middle of the 19th century, after Downing's articles appeared in The Horticulturist, a wide public movement (including politicians, business people, publicists and landscape architects) began to support the creation of a large municipal park in Manhattan. This movement was triggered by fears that, in the future, the island of Manhattan would be totally developed.and would not allow the island proper open spaces. The population would be prevented access to open spaces, unless such open spaces were provided on the island itself. The movement was stimulated by a strong sense of urgency and by a perceived time shortage; the wave of construction on the island was sweeping, and idleness at this critical point might have lead to "missing the train".[69]

Illegal and uncontrolled construction by the thousands of immigrants sweeping the island during this era threatened to rob every piece of land from the public. Therefore, assertive government action was required. Such actions would both allocate areas for park purposes as well as firmly control infrastructure construction that would directly support vacation and leisure activities.[70]

[69] Rybczynski, Witold. *A Clearing in the distance: Frederick Law Olmsted and north America in the nineteenth century.* New York: Scribner, 2000..

[70] New York Central Park<http://www.centralparknyc.org/thenandnow/cpc-history/>

Central Park was the first landscaped public park in the United States. Advocates of creating the park—primarily wealthy merchants and landowners—admired the public grounds of London and Paris and felt that New York needed a comparable facility in order to establish its international reputation. They argued that a public park would offer their own families an attractive setting for carriage rides and would also provide working-class New Yorkers with a healthy alternative to the saloon. In 1853, after three years of debate over the park's site and cost, the state legislature authorized the City of New York to use the power of eminent domain to acquire more than 700 acres of land in the center of Manhattan.

An irregular terrain of swamps and bluffs punctuated by rocky outcroppings made the land encompassed by Fifth and Eighth avenues and 59th and 106th streets undesirable for private development. Creating the park, however, required displacing roughly 1,600 poor residents, including Irish pig farmers and German gardeners. These urban poor lived in shanties on the site at Eighth Avenue and 82nd Street. Seneca Village had been one of the city's most stable African-American settlements, with three churches and a school.

In 1863, Central Park's boundaries were extended to 110th street, bringing the park to its current 843 acres. The question of who should exercise political control over this new kind of public institution was a point of contention throughout the nineteenth century. The Republican dominated state legislature appointed the first Central Park Commission (1857-1870). This action abandoned the principle of "home rule" in order to keep the park out of the hands of locally elected—and primarily Democratic—office holders.

Under the leadership of Andrew Green, the commission became the city's first planning agency and oversaw the management of the park as well as the layout of uptown Manhattan. After a new city charter in 1870 restored the park to local control, the Mayor appointed park commissioners. In 1857, the Central Park Commission held the country's first landscape design contest and selected the "Greensward Plan," submitted by Frederick Law Olmsted (the park's superintendent at the time) and Calvert Vaux (an English-born architect and former partner of the popular landscape gardener, Andrew

Jackson Downing). The designers sought to create a pastoral landscape in the English romantic tradition. Open Rolling Meadows contrasted with the picturesque effects of the Ramble and the more formal grounds of the Mall (Promenade) and Bethesda Terrace. In order to maintain a feeling of uninterrupted expanse, Olmsted and Vaux sank four Transverse Roads eight feet below the park's surface to carry cross-town traffic. Responding to pressure from local critics, the designers also revised their plan's circulation system in order to separate carriage drives, pedestrian walks, and equestrian paths. Vaux, assisted by Jacob Wrey Mould, designed more than forty bridges to eliminate grade crossings between the different routes. [71]

The construction of Central Park was a complex process that spanned many years. Today, the park is not only the "green lung" and a landscape that sits in contrast to the city, but it also serves as one of New York's central cultural symbols. It would be impossible to describe the city's life style, image and customs without it.

3.2.3 Mount Royal Park, Montreal.

Mount Royal Park was originally created as an act of remarkable foresight—possibly the first recorded example of a successful environmentalist action in Canadian history. [72] The creation of the park checked a much earlier threat to the integrity of the mountain.

By the mid 19th century, the wealthy had tamed Mount Royal's lower slopes with orchards and country villas. Furthermore, overcrowded cemeteries in town had been transferred to new locations on the northern side of the mountain. Nevertheless, the mount's main wooded crest stood intact, and appeared just as it had looked centuries earlier when the first European explorers planted their flags there.

Then, one very cold winter, a certain Sieur Lamothe acquired a prominent part of the mountain's southern side and crest. He proceeded to quick-cut the ancient trees in order to sell them as firewood. This led to an angry public outcry, and a surprising result

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[71] Rybczynski, Witold. *A Clearing in the distance: Frederick Law Olmsted and north America in the nineteenth century.* New York: Scribner, 2000.

[72] London, Mark. "A manifesto for Mont Royal Park." *Canadian Heritage*, 13.2 (may-jun 1987) :19-24.

ensued: Montreal's aldermen boldly decided that the city should buy the then-outlying mountain and turn it into a park. What was more surprising was that the aldermen agreed to pay what was then a fabulous sum of 1 million dollars for the property, even though the population of Montreal at the time was barely 100,000.

Montreal's aldermen hired Frederick Law Olmsted, to design the park. Olmsted, who designed New York's Central Park, felt that Mount Royal's greatest asset was its pristine, unspoiled quality. He resisted attempts to fill the park with amusements and insisted on "*the least possible disturbance of nature... Small as your mountain is*" he wrote, "*it presents in different parts no little variety of form and feature.*"[73]

He developed a scheme to protect and encourage the variety of landscape forms and natural plant communities by dividing the park into eight areas—each with its own character. Since the mountain was not very high, great care had to be taken not to diminish its grandeur, which Olmsted saw as a picturesque backdrop for the city. To emphasize the visual effect of height, he planted stands of tall trees at the summit.

In the spirit of the Urban Reform Movement, the mountain's two cemeteries were designed as public gardens for the living as well as for the dead. Picnics and even hunting were popular activities in the park. The park was opened in 1876.

Figure 3.4.1: Mount Royal Park- Great care had to be taken not to diminish its grandeur, which Olmsted saw as a picturesque .backdrop for the city.

Figure 3.4.2:The Montreal city from the Park.
(Source:< pages.infinit.net/ bluejay/album.htm>October 15 1999)

Despite public protest, Camillien Houde Drive was opened in 1960. It featured concrete overpasses, highway interchanges, lighting, big parking lots, and crude metal guardrails. In short, the drive had all the accoutrements of a "parkway." A few projects

[73] London, *A manifested f...* (1987),20.

were built during the following years. After the chalet and new lookout were constructed in 1932, Beaver Lake was built on a site originally proposed by Olmsted.
Many of Olmsted's original landscape features remain, and are regarded with great affection by the people of the city. The underlying character of Mount Royal still survives.[74]

3.1.4 Bois de Boulogne

Similar to those in Britain, the first public parks in France were the recreation of private parks owned by the nobility.But, while parks in Britain were first opened to the public through a prolonged legislative process, public parks in France were ushered in by the French Revolution. Such was the case of the TuilerieS Gardens. Yet, the largest of Paris's public parks, the forest of Boulogne, was planned in advance for the welfare of the general public. The initiative for the construction of this park began relatively late, in 1853.

Figure 3.5.1:
The forest of Boulogne, was planned in advance for the welfare of the general Public.

(Source:www.viaggiaresempre.it/pagina7a.html)

The 865 hectares Bois de Boulogne (8300 dunam) lies on the western edge of Paris. It was created in the second part of the 19th century, under the rule of Napoleon III. Its designer, the Baron Haussman, admired the size and centrality of the London parks (such as the beautiful Hyde Park and Regent Park). He decided to create two similar parks in Paris. They are, respectively, the Bois de Boulogne on the west side of Paris, and the Bois de Vincennes on the east.

The Bois de Boulogne is the most fashionable of the two, and is bordered by the very residential cities of Neuilly and Boulogne. In 1848, the Bois de Boulogne became the property of the state, and in 1852 it was subsequently sold to the City of Paris, which completely redesigned it.

74. Rybczynski, *A Clearing...* (2000.)

The extremely popular new Bois de Boulogne was then fully integrated into the capital. The magnificent and wide Avenue de l'Impératrice symbolically opened up the park to the population of Paris.

Between 1852 and 1855, the land was transformed into a landscaped park, with lawns and winding paths. All of the straight paths—apart from the Allée Reine Marguerite and the Avenue Longchamp—were removed. The inferior and superior lakes (connected by a waterfall) were created, and the excavated earth was used to create the Butte Mornemart.

Between 1855 and 1858, the Longchamp racecourse was built on the plain bearing the same name. The three rivers that flow from the Lac Inférieur are the source of water for both the Neuilly and Saint-James ponds as well as the Longchamp waterfall.

Playgrounds, pavilions, chalets and concessions—such as the Pre-Catalan gardens and the Jardin d'Acclimatation (children's amusement park)—added to the visitor's enjoyment. Four thousand trees and bushes were planted amongst the countless arrangements of flowers. It was at this time that the Bois de Boulogne took on its present form.

Figure 3.5.2: Advertisement "Dinez en Plein Air Chez Drouant au Bois de Boulogne-Paveillon Royal"1928.

(Source: Levin, David.USA.privet collection, *Graphic Design from the 1920s and 1930s in Travel Ephemera/France.*<www.travelbrochuregraphics.com/…/ drouant.htm>)

The Bois de Boulogne is a favorite destination of Parisian walkers, bicyclists and equestrians. It also accommodates the two Parisian horse courses (Auteuil and Longchamp) and the pretty Bagatelle gardens.

As described in the first part of this chapter, the Ayalon Park represents the last open space at the midst of the central urbane lump that inhabits a considered bulk of Israel's population. It includes both, natural and artificial components, together with cultural

elements, forming together a sound base for planning that will result in added value to its surrounding city areas, as well as radiating onto the rest of the country.

Each of the following three parks, reviewed above, sheds light on a different relevant comparison analogy to the potentiality of the Ayalon project:

a) **Mont Royal Park, Montreal** – the unique aspect of a modest mountain rising above the flood plain of the St. Lawrence River provides a landmark and point of reference for the entire urban region. Fredrick Law Olmsted proposed to increase the vertical presence of the mountain by selecting tall tree species, densely planted

Similarly in the Ayalon Park site, a discontinued regional waste site that forms a huge mountain of landfill is highly visible in the midst of the Park and can be viewed from a the perimeter of the city. Left untreated, the site could become a ecological disaster. Strategies to deal with the site, described in the Ayalon plan, for see developing a cultural landmark in the middle of a vast urban region.

b) **Central Park, New-York** – though its elevation is at a level with the surrounding Manhattan city area, unlike Mount Royal Park in Montreal, Olmsted and Vaux's plan for a new park in New York City converted a large area of marginally useful land into a "green lung" that provides the surrounding population of millions and with recreation facilities and proximity to natural settings as well as becoming one of New York's central cultural symbols.

On the Ayalon park site, the potential conversion of a vast source of pollution in the middle of Israel's most important urban region into a large park, will serve similar functions of providing access to natural settings, recreation opportunities and a variety of cultural sites that are proposed for the park.

c) **Bois de Boulogne, Paris** – developed at the outskirts of the city of Paris, as were Mont Royal Park and Central Park, the Bois de Boulogne was tdeveloped as an urban forest that, with the Bois de Vincennes, served to define the boundaries of the core of Paris.

Similarly, the spatial location of the site of Ayalon Park has served as a boundary for residential development around it's considerable parameter. In contrast to Bois de

Boulogne and Mont Royal Park, however, the site lacks natural inherent quality that will have to be developed in the future plans for the site.

The common denominator of all three parks resides in the contrasting environmental and cultural identity with respect to the surrounding urban areas, the important roll that these site do and can play in providing an urban population with recreation opportunities that are not available elsewhere in the urban fabric, while also providing boundaries that direct and organize urban growth.

3.3 Background of the conservation of the area:

The following questions arise: How was this area conserved? How did it survive in the midst of a crowded urban system with a high demand for real estate? What is the influence of national plans on its preservation? What is the strength of the definitions set by those plans on the design of its landscape?

3.3.1 Physical Facts.

The park lies in the land of Galilee land and belongs to no local authority. It is located in the jurisdiction of the Tel Aviv district commission. As such, this parcel of land encompasses exceptional possibilities.

Beyond the following statutory definitions that protect the area, there are some physical components which made it difficult construct in the open area:

- As previously discussed, the land of Mikveh Israel and the agricultural land has been leased for 200 years, starting from 1948. In addition, the Knesset enacted the "Mikveh Israel Law" in 1976 in order to protect the areas of the agricultural school. The law has defined the scope of the area belonging to Mikveh Israel, as well as its purposes and the purpose of the school. The confirmation of the Minister of the Interior, the Minister of Agriculture and the Minister of Education is required to make any changes in those purposes. In order to ensure the green future of this parcel of land, the leading statute redefines all the agricultural land

existing in the park's territory, except Mikveh Israel land, as "a reserve for purposes of a park"[80].

- As mentioned, the Ayalon stream has a potential to flood, this area of the park was kept as a flood plain for the stream since the British Mandate, which is one of the reasons why construction in the area was avoided, and the area was not included in any of the municipal authorities surrounding it.[81]
- At the Hiriya site construction was avoided because the nuisances of a garbage collection site were overwhelming, despite its attractive location. Such nuisances include noise, stench, dust, light rubbish, and the presence of birds and various animals.[82]

1.3.2 Ayalon Park in the view of national planning.

By examining the designation of this area as open space and a metropolitan park drived from previously described national master plans, one can see it as a direct result of the formulated in the latest national master plans.

This new outlook calls for reorganizing the Israeli space so as to balance constructed and open spaces. It was expressed as follows in the "Israel 2020" plan: "*Organizing the space with reciprocity and cooperation between the open and the constructed.*" According to this school of thought, the open area is not merely another "receptacle" or potential site for construction and development, but is rather an independent and valuable factor on its own. Its value is equal to that of constructed areas.[83]

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[80] Asif, Architectectes. *Ayalon Park, Plan's background.* The Israeli Lands Administartion, September 1996.(Hebrew)

[81] Plasner Architects ,Gogenhaim-Bloch, Kaplan Moti. *Ayalon Park, Description and analysis of existing situation, Report no 1* .Ministry of interior, ministry of housing&construction, Israel land authority, August 1998. (Hebrew)

[82] Asif, Architectectes. *Ayalon Park, Plan's background.* The Israeli Lands Administartion, September 1996.(Hebrew)

[83] Mazor Adam, *Long range planning to Israel-rational and method,* preface. Israel 2020 Master Plan for Israel in the 21st century, Technion-Israel Institute of Technology,Faculty of Architecture and Town Planning, Samuel Neaman Institute for Advanced Studies in Science and Technology, 1997 .6-12(Hebrew).

The national plans regard open spaces as the only factor that can both provide for the existence of urban systems as well as avoid their amalgamation. This national plans view the open areas as a barrier between urban alignments, and consider the streams as a major component of the physical design of Israel.

This view, which is at the heart of national plans, was previously proposed in the 1950s by the Sharon Plan. Since then, it has remained a planning principal in all regional and national plans. This Case Study examines the practical contents of this view.

3.3.2.1 Sharon National Master Plan, 1951:

As mentioned in chapter 4.2, early references to the more modern approach (which considers streams as open barriers) can be seen in the first plan prepared by Arieh Sharon.

This plan argues that green belts are needed, as they function "as separation areas surrounding the urban concentration." The lack of such green belts *"may cause the city to continue its spread endlessly."* Green belts will help *"to avoid the total assimilation of neighboring smaller urban concentrations into Tel Aviv."*[84] These belts surround the streams in the center of the country (as shown in **figure 3.10** and in **Figure 2.2**,p.55) and include the Ayalon Park area.

Figure 3.9:
The Location of Aayalon Park on Sharon's Plan. (The circle marks the location of Ayalon Park.)

[84] **Sharon, Arieh. *Planning in Israel.* The Governmental printer, 1952.(hebrew)**

3.3.2.2 National Master Plan 31(TAMA 31):

Tama 31 allocates the entire Mikveh Israel territory as an *"open rural landscape."*(Figure 1.11, p.30) This type of allocation inside an urban area is rare in the drawings of Tama 31, and reflects the statutory condition of the large agricultural area in Mikveh Israel, which is protected by law.

In this planned area two land purposes are assigned. The first is "*urban constructed area*," and the second is "*open rural landscape area.*"

The plan allocates the latter for *"agricultural use, rural landscape, farm settlements, tourist and recreational facilities, facilities and institutions related to the rural settlement, other facilities which integrate with the open/rural area and areas allocated for the preservation of the open landscape."*[85]

Figure 3.10: The Location of Aayalon Park on National Master Plan no 31. (The circle marks the location of Ayalon Park.)

The distribution of the areas allocated as open landscapes with park elements is the basis for such planning decisions.

3.3.2.3 Israel 2020:

The summary of the Israel 2020 Plan describes the principal of the green heart. The green heart fills the increasing demand for an open area that is in the centre of the urban space, and that is both qualitative and accessible. Such open spaces will function as areas for leisure and recreation which serve the dense urban population. The plan provides for: *Maintaining a continuity of openness in the heart of the urban space, with high accessibility for its population, nurturing the green heart as an open qualitative area in*

[85] Lerman Architects, *Israel National Master Plan 31.* Ministry of interior, ministry of housing&construction , 1991. (Hebrew)

the center of the space, while utilizing surrounding existing resources and securing its accessibility from all the settlements in its neighborhood.[86]

According to the Israel 2020 plan, the system of open areas in the center of the country will create barriers that cut off the continuity of developed areas, while protecting and preserving the value of nature and the landscape. According to this viewpoint, open areas within urban areas will exist along the axes of streams. Agricultural land will be added to these open areas, and will serve to preserve the landscape of orange orchards and fields in the center of the country. The "open areas system" section of the plan refers to this approach:

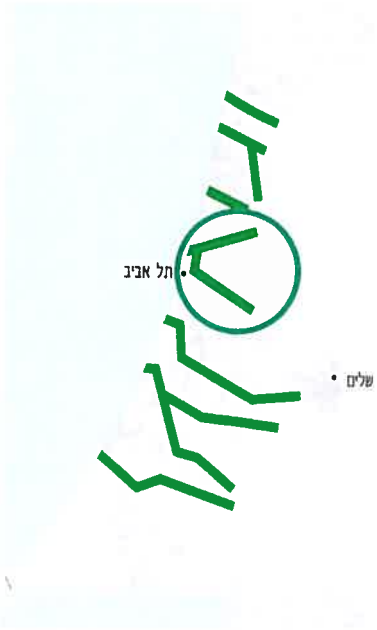

Figure 3.11: "Maintaining a continuity of openness in the heart of the urban space"...from the Israel 2020 plan. (The circle marks the location of Ayalon Park.)

The suggested approach gives the central metropolis—and especially Tel Aviv and its daughters—a structure of urban extensions spread into agricultural open areas. Thus, green fingers close to the axis of most streams, are created, which penetrate the urban formations, with a large surface area giving the maximum contact between the built and the open."... These area barriers - in the form of open agricultural land – have a great importance in supplying the mass of population in the center of the country with leisure and welfare. The natural quality of these areas is not necessarily high; its importance is in its mere existence as areas, which are still open in a dense and built space. Therefore, its development and nurture will take the form of the supplying the best welfare functions;

[86] Mazor Adam , *The Vision of the future The Spatial organization plan for Israel*. Israel 2020 Master Plan for Israel in the 21st century.Technion-Israel Institute of Technology,Faculty of Architecture and Town Planning, Samuel Neaman Institute for Advanced Studies in Science and Technology,1997. (Hebrew)

Intensive development in the direction of increased capacity and maximum use for social functions."[87]

This approach suggests limiting development in these green" fingers" in order to preserve the contrast between them and their surrounding urban areas. Green fingers will be open areas that will ensure the quality of life for those who inhabit the center of the country.

3.3.2.3 National Master Plan 35(TAMA 35)

The last national plan adopted by the National Council for Planning and Construction suggests using streams as open barriers between population concentrations. The council directs the plans for such open barriers. It also oversees the preservation of the landscape surrounding the streams and sustains their ecological value, as well as their rehabilitation and development for vacation and leisure.

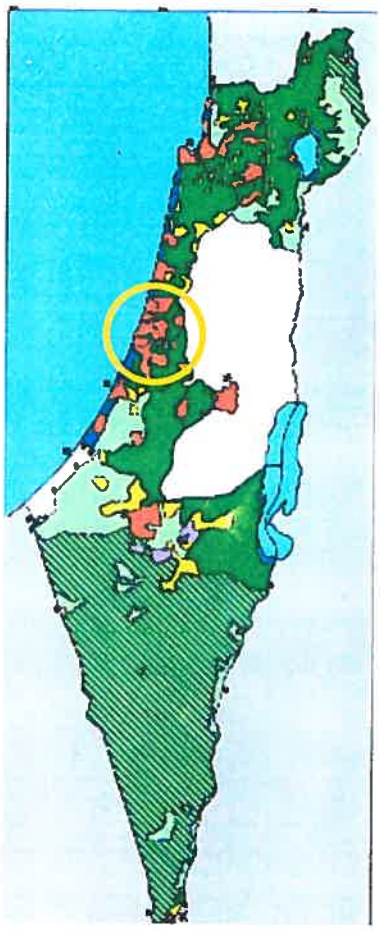

Figure 3.12: The location of Aayalon Park on National Master Plan no 35.

To do so , Tama 35 uses several tools:

1. The National Stream Map: The National Stream Map depicts the National Stream System, and indicates those streams that most influence the landscape and environment.
2. The designation of the "stream string": This section of the TAMA 35 secures an encompassing plan for the stream. It considers its environment, and seeks to prevent damage to the value of the ecology and landscape.

[87] Mazor, *The Vision* ...(1997).

The emphasis given to the axis of these streams in the National Plan is an important basis for local plans for the area surrounding the Ayalon Stream.

3. Designation of "*a combined preserved texture*": This definition includes the open areas around the streams in the central area. This determination emphasizes their importance and equalizes them with high quality nature resources, even if they are not of such quality. Their importance lies in their role in the entire system. That is, they create necessary barriers in the shore cities, and have potential for recreation development, which will serve the central population.

In these open spaces, "landscape splendors" were incorporated in order to preserve the agricultural and settlement heritage of Israel. The areas of Ayalon Park, including the Ayalon Stream, Hirriah and the agricultural land of Mikveh Israel, are intended to fulfill this definition.

3.4 Conclusion

In summary, the area of Ayalon Park appears in national plans throughout the years. This fact has two major consequences with regard to the development of Ayalon Park:

1. The area in its present condition does not include natural landscape qualities, but does include many natural obstacles and is not used by the surrounding population for rest and recreation. In spite of this, all plans recognize its importance as an open and accessible area in the heart of a dense urban space. National plans thus have the power to create, preserve and, in this case, "save" the last landscape. Without the aforementioned classifications, this landscape would have disappeared in the same way other landscapes (that were not included in these classifications) disappeared.
2. The national definitions outline tools and plans for the area's future destination. They consider the existing ecological system and preservation of the landscape heritage, and also include specifications for the area's purpose as an intensive park area that is intended to serve an urban population.

Planners face the central question of how to combine elements of preservation with those of development in order to coordinate a general landscape picture. How does one strike a balance between preserving the landscape and ecological systems while developing a park and attractions for the urban population of Tel Aviv?

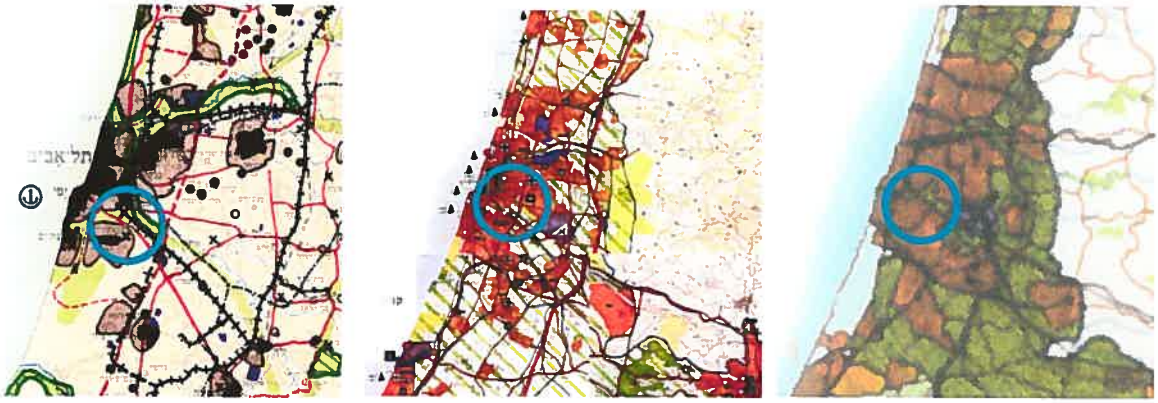

Figure 3.13: Shows the location of Ayalon Park in three of the National Master plans.


HOLY
PLACE

CHAPTER IV:
Principles of an Open Landscape Strategy

This vast world is essential to our existence, but only it's being independent of us, makes it worthy of our wonderment. Mary Midgely[88]

An ancient Cashmere verse that is widely adapted by world environmentalists states, "People do not inherit land from their ancestors, rather they are borrowing it from generations to come".[89]

Preserving open spaces is a "last chance" to rescue natural physical components while expoloring their uniqueness. In time, these natural components, as odd as it seems, can include man made environmental interventions. For example, the "retired" Hiriya landfill may well be considered an environment and cultural asset that is both "local" and natural looking.

Thus far, it has been assumed that a national plan can "rescue" open spaces. How do we achieve this rescue, and how can we convert open space to a landscape that is "*worthy of our wonder.*"

The outline plan for the Ayalon park received unprecedented exposure in Israel. It triggered public discussions and seminars addressing all of the plan's implications, namely: economic, cultural, social, artistic, ecologic implications, as well as the future impact of environmental development.[90] Ayalon's location in the midst of the most expensive area of the "land-starved" country of Israel caused a great national sensation, especially considering that developing the land for housing would be a profitable project worth many billions of dollars.

The suggested plan is a victorious blow to contemporary trends. It contradicts short term interests, and instead places current and future public well-being before the enormous

88 Midgely, Mary. *Animal and Man. n.p.:n.d.*

89 Zafrir, Rinat. "A highway would pop up at every corner." Ha'aretz . Israel .21 September , 2003 (Hebrew).

90 Beracha foundation. *Ayalon Park, International planner's workshop*. Recommendations.n.p.:n.d. (Hebrew)

pressure of land-market demand in this particular area. Yet, Ayalon initiators and planners face unprecedented hardships in their attempts to withstand such hurricane forces.

Two central questions have to be asked when examining the Open Landscape Strategy in Israel:

1. What are the environmental paradigms upon which the decision is made to dedicate the open space as park land, instead of commercial real-estate? What tools enable the realization of such an uneconomical plan?
2. What possible strategic options are available for planning an open space within an urban continuum? What is one's **starting point?** How does one find the equilibrium between intensive planning and the natural ecologic system? What is their meeting point? What is their friction point? What relative weight is given to economic considerations as opposed to other considerations?

This chapter tackles all these questions, and assumes that some open spaces are successfully preserved in spite of pressures and obstacles. This chapter also focuses on the tools and strategies that enable the transformations of open sites within a dense metropolis into landscape sites that preserve some of the uniqueness of the locale. Such preservation is an acute necessity for Israel, both locally and nationally.

4.1 basic definitions

In order to be able to answer these two questions, we first have to discuss, two key aspects regarding open space strategies:

The term "open spaces" has a wide variety of definitions and reference terms. The basic term refers to areas that are not built up, including nature reserves, national parks, forests, military training grounds, and agricultural areas.

The term's broader definition relates to all undeveloped areas, including peripheral areas on the urban boundary and areas of an interim status. Buffer zones in the urban demarcation will be included in this definition. This definition gives further meaning to

the "open" concept since it has many planning options, while build-up areas are limited by their physical structure. As such, they are to a large extent "closed" to planning options.[91]

4.2 Open space in Israel: reality and its problems:

It is customary to classify open spaces into two categories: national (interurban) and urban, depending on their location. Israel's planning institutions had long recognized the importance of preserving open spaces. In 1994, the National Planning and Building Council conducted a survey for open spaces. The survey's results are displayed in the following table:

Type of space	Total area in thousands of dunams*	Percentage of country's surface area **	Comments
Forests - National master plan no. 22	1638	7.8	
Nature reserves and gardens - National master plan no. 8	3537	16.8	81% are in the Negev area
Mediterranean coastline – National master plan no. 13	41	0.2	
Impounding water and surface water penetration grounds – National master plan no. 11	47	0.2	
Area, suburb, and quarrying – National master plan no. 14	148	0.7	
Army's live ammunition training zones	7442	35.4	86% in the Negev area
Development area – according to statutory plans	2315	11.0	
Roads – National master plan no. 3	100	0.5	Based on a rough estimate of the width and shoulders of different road types

Table 4.1 a survey for open spaces in Israel.2004

[91] Kaplan, Moti and Dayan Oren. *The open landscape system.* Introduction, part 1. Israel 2020 Master Plan for Israel in the 21st century, Technion-Israel Institute of Technology,Faculty of Architecture and Town Planning, Samuel Neaman Institute for Advanced Studies in Science and Technology, 1997. (Hebrew)

* Calculations were made by the author, based on figures quoted in the open spaces survey [92]

**Assuming a total surface of approximately 21,000,000 dunams.

The open spaces in this table add up to approximately 73% of the country's surface area. There is still no data for the remaining areas, which include agricultural land, forest reserves not included in master plan no. 22, pastures and other open spaces in Israel[93]. Human activity of all kinds depends upon the supply of resources, waste absorption and other essential services that are obtained from the natural environment. If we are to continue to have good living conditions, we must ensure that nature's productivity is not used up faster than it can be renewed, and that no more waste is discharged than nature can absorb. Space required to supply each and every one of these functions can be calculated. This space is termed "ecological footprint." It serves as an accounting tool for ecological resources, by which categories of human consumption are compared with areas of productive land required for providing resources and assimilating waste products.[94] The ecological footprint indicates how sustainable our lifestyle is.

According to research originated by the Task Force on Healthy and Sustainable Communities at the University of British Columbia in Canada, an average Israeli citizen has a footprint of about 54 dunams.[93] This area provides him with food, clothing, computers, plastics, housing, cars, etc. At the same time, this footprint absorbs all of his waste, such as CO^2 emissions, industrial pollution, garbage, and sewerage that is either directly or indirectly produced via his lifestyle. Calculations indicate, however, that the total area of the ecological footprint required by the population in Israel is 15 times the actual country's surface area! Only by importing products from abroad—and thus by

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[92] It should be emphasized that the above table is based on general national plans and only serves to provide an estimate

[93] Israeli organization for environmental protection, information paper no 4

[94] The idea of "ecological footprint"
<http://www.rprogress.org/programs/sustainability/ef. e>

virtually using surface area of other countries—can Israel overcome its footprint discrepancy.[95]

The problematic aspect of Israel's restricted space and limited capacity to carry this burden is not new. It had previously surfaced under the rule of British mandate, when Israel's capacity to absorb and maintain millions of individuals was a controversial issue. The tendency of population dispersal during the State's initial years led to a widespread pattern of settlement communities, in which villages, kibbutzim, and small towns were scattered over Israel's northern expanse.[96]

Israel's space shortage is not limited to open spaces, but is also—and perhaps primarily—related to population deployment over built-up areas, reflected in a congested network of settlements and roads—factors which weigh heavily upon expansion ability.[97]

The State of Israel has developed into the most congested country in the Western world. Translating density in terms of open spaces is a numerical question, and requires setting standards for the minimal open space required for a city resident. In comparison to countries such as the USA (25 m^2) or England (22 m^2), in Israel the recommendation is for about 20 m^2 of open space. In practice, however, there is as little as 10 m^2 per individual![98] This number is significant insofar that the majority of the country's population lives and is destined to live in areas that are congested from the perspective of open space and its function.

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[95] Israeli organization for environmental protection, information paper no 4

[96] Alterman, Rahel and Avi Musery. *The National Planning –from the past to the future.* Mazor Adam and others , report A, stage A, volume A . Israel 2020 Master Plan for Israel in the 21st century, Technion-Israel Institute of Technology,Faculty of Architecture and Town Planning, Samuel Neaman Institute for Advanced Studies in Science and Technology,1997.3-35.(Hebrew)

[97] Lerman Architects, Sadan, svivot tichnun. *Policy and tool for the preservation of open spaces, background for policy definition.* preliminary report no 1, The open landscape institute(0LI) the society for the protection of nature in Israel(SPNI), April 2002. (Hebrew)

[98] Man, Nature and Science. *The offense in open space.* Information document, summer 2000. (Hebrew)

About 11,000 species are currently in danger of extinction in Israel. These endangered animals include 24% of all mammals and about 12% of the avian population. Research studies point out that most (85%) of the extinction threat can be attributed to loss of living space.[99]

Accelerated development in the north and south parts of the country has caused a constant erosion and "slicing" process. If this process continues, it will eventually lead to "open landscape disappearance".[100]

The main effects of these accelerated development processes are:

- Changed landscape appearances, both generally and locally.
- Erasure of historically valued landscape styles and sites, both ancient and recent.
- The diminishment of potential cultural space resources.
- The increase of a subjective feeling of "stuffiness."
- Impairment of the landscape continuum.
- Diminished volume of unimpaired landscape

The challenge posited in the introduction of this chapter was to examine the tools by which the individual planner complies with open space reservation policy, and retains the original flavors of open spaces even as he or she keeps track of present requirements. However difficult this mission seems, it must be adressed in order to prevent the complete loss of Israel's landscapes.

[99] Man, Nature and Science. *The offense in open space*. Information document, summer 2000. (Hebrew)

[100] Sagi, Yoav. "Escape From Megalopolis." *Eretz Magazine, (November-December 1996).*

4.3 Strategies for designation and preservation of open space

The question of whether to designate a given area for either an open space, a park or for real estate use is mainly an economic issue. However, changing environmental paradigms have political and socioeconomic consequences which affect the designation of these area.

4.3.1 Changing paradigms of the idea of environment.

Environmental movements in Israel have been reformulated during the last decade with the aim of changing paradigms. This reformulation parallels a broader global movement that has aimed to alter environmental paradigms.

This trend originated in order to counter the enormous challenges resultant of the country's accelerated development. Prior models were not equipped to effectively challenge non-environmentally motivated development, which resulted from both political and cultural forces. Such development had inflicted heavy damages upon the country's landscape.

In order to establish a more revolutionary vision and approach, popular cultural support is needed. This support can only be achieved through powerful political influences.[101]

The initial environmental approach in Israel, like that of many western countries, leant toward the **Preservation of Nature**. The Israeli environmental movement had roots in Zionism, despite a seeming contradiction between it and the ideology of land reshaping and rebuilding. The Israeli Nature Preservation Society as well as other political environmental movements are in fact products of the country's Zionistic historical processes.

In the sixties and seventies, when mankind's influence on nature had become a scientific issue that was discussed by the world's academic communities, environmentalism gained new vision. Although the damages mankind had inflicted upon nature were well understood, the new focus was on the negative effect of such damages on human health, rather than on the urgent need to preserve nature.

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[101] Swartsz, Ilan. *Changing paradigms in the environment idea,* The Heschel Center for Environmental Learning and Leadership. <http://www.heschelcenter.org/paradigms_heb.html.>

While the old approach was motivated by a notion of a pure and natural primal world, the new approach focuses on human health preservation. The latter served the interest of humanity, and its rhetoric could thus be easily absorbed by the people.

By definition, these two environmentalist models are not contradictory. Rather, they share the same origin, but pull in different directions:

1. **The First model of "Nature Preservation"**[102] emphasizes nature as an entity that is detached from humanity. It focuses on preserving nature, and on saving it from human intervention and land development. This approach separates human beings from nature and does account for the issue of a growing population and its living standards.
2. **The second "Scientific Environmental Quality"** model sees people as part of the natural world, and emphasizes that their health and prosperity depends on nature. This model offers empiric and quantitative tools for dealing with the problems of accelerated development. It has been easily accepted both by public opinion in general as well as by major decision makers in particular.
3. **A third model of "locality based environment"**[102] started to show up in Israel in the nineties. Although it was based on western world concepts, much of its foundations were drawn from observations of third world environmental developments.

The third model is a synthesis of lessons learned from the first two. It incorporates their positive aspects while trying to avoid their drawbacks.

Unlike the first, this model does not separate man from nature by envisioning the primal environment preservation as a prime value. One asks *how* and not *if* mankind has an effect on nature. Locally based environment looks upon people's work associated with land—agriculture, architectural and engineering planning, and landscape planning—as the means by which man connects to the world around him in a mutual relationship. That is why these occupations must be environmentally oriented.

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[102] Swartsz, Ilan. *Changing paradigms in the environment idea,* The Heschel Center for Environmental Learning and Leadership. <http://www.heschelcenter.org/paradigms_heb.html.>

Unlike the scientific model, this model not only deals with the specific effects of man on his natural resources and the associated health hazards, but rather carries further, and becomes part of a human social vision.

To demonstrate the differences between the approaches of the second and third models, let us examine two examples of environmental issues via both models.

1. **The motive for employing maximum use of daylight**: The Scientific model will want to maximize the use of daylight because it preserves natural resources by saving energy. The more contemporary third model will state that a work place lacking natural light and air is not a suitable human working environment.
2. **The motive for urban parks**: the scientific model will see urban parks as "green lungs" that supply quality air and a practical leisure resort. The locally based environmental model will consider urban parks a necessary part of the city, through which urban dwellers contact the natural world. The third model will state that cities without parks are not suitable living quarters for human beings

It is important to note that the third model, based on locality as well as on values supported by Israeli culture, has understood that open space must be preserved not only for its own sake, but because open space has paramount importance in the quality of human life, human culture, and human personality.

The second part of this chapter discusses the way in which this paradigm is being translated into and used as a planning tool.

3.3.2 "Economical" versus the "Ideological Norm" approach[103]:

In the process of designating open spaces, the main dilemma is to consider economic concerns while attempting to convert the environmental paradigm into a realistic plan. If financial concerns were the only concern, little open space would be spared.

Decisions on the volume and location of open spaces are problematic. Both local and central planning will encounter financial dilemmas when allocating open space. The perceived value of open spaces to different individuals at the same or different locations could vary enormously. Likewise, its usefulness might vary according to immeasurable qualities such as enjoyment, beauty and tranquility. All of the above leads to the inability to evaluate the market cost of open spaces.[104]

The drawbacks of economical evaluation can be summed up as:

- The unavailability of human environmental welfare metrics which would measure enjoyment, beauty, appreciation, tranquility etc.
- The financial inability of the individual to "buy" what he really strives for.
- The fact that economical considerations, which are subjected to short term pressures, usually indicate that long term needs are overlooked.

An alternative to the shortcomings of economical evaluations is the "ideological norms" approach. The ideological norms approach advocates norms by which open space designations are centrally determined, via directives that issue countrywide allocations. Yet, the ideological norms approach has the following drawbacks:

- It lacks objective, long-term, measurable and uniform rules by which allocation norms are determined.

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[103] Toyster, Gidi. in Asif, Architectectes. *Ayalon Park, Plan's background.* The Israeli Lands Administartion, September 1996.(Hebrew)

[104] Toyster, *Ayalon Park...* (1996).

- Politically committed decision makers are inevitably linked to the determination of open space allocation norms.

If one opts for the "less evil" alternative, the ideological norm system is preferable. Thus, clear and effective legislation must be passed in order to devise a non-politically motivated, objective and professional academic body that will determine the O.S. allocation norms.

A model for evaluating such norms and their calculation can be found in "Land quotas for planning."[104] This work was published by the Urban and district Research Centre of the Technion -Israel Institute of Technlogy. Although this work was published over two decades ago, in 1980, it informed several important decisions made at the recent planning for Ayalon park grounds allocation, which discussed adaptations to suit the new millennium.

This work distinguished between two of the following two terms, when used in context of open spaces:

- **Activities** performed at open spaces by people.
- **Functionality**: defined as the beneficial outputs of the open space to animals, vegetation, urban structure, and man. Here, functionality is considered independently of actual human activity within the open space grounds. (The work describes an example of a man's relaxation as he looks at a green garden from the window of his home.)

"Activity" has quantitative aspects. Functionality, on the other hand, has a limited quantitative meaning but is high in social and public values. For grounds such as those of Ayalon Park, separation of the two terms is very important, as this separation displays the minimum requirements for serving the welfare of the district population while leaving enough open space in order to stress its natural qualities.

[104] " Land quotas for planning – level A, open spaces" 1977 by the urbane and Technion district research center. + Volume VI of same research "Land quotas for planning – summary and integration" 1984

In Yariv's work,[105] the following additional norms for open space functionality are classified via the following definitions:

- **Recreation and resting** – providing solutions to social and psychological human needs.
- **Environmental** - providing solutions to the natural well being, like absorbing pollution, balancing radiation, ground drainage of rain fall.

Structural like: preservation of landscape valued site, granting a visual point of reference to surrounding towns and quarters, providing viewing posts, canceling nuisance parts, softening of a harsh surroundings and introducing variety and coloration to a monotonous background.

These classifications are an example for the multitude perceptions regarding the "Ideological Norm" approach of open spaces and their functions.

Such approaches had changed with different cultures and age, but a common to all was the conceptual perception of the stand-alone value open spaces had been granted, irrespective of economical consideration or their actual practical usage.

In Europe and the U.S.A. preservation tools had been devised for general and urbane open spaces. These preservation tools are meant to bridge between the economic and the ideological norms. Preservation tools relevant to urbane vicinity open spaces are summarized in the following table **(4.2)**[106]: It should be noted that each state and country has its own legislation set of directives and enforcement methods.

[105] Yerivat, z. *Open Urban Space Planning.* Israel : Technion- Israel Institute of Technology, Faculty of Architecture and Town Planning , The urbane and district research center. 1976. (Hebrew)

[106] Based on Policy and tool to preservation open space, background for policy definition, preliminary report no 1, April 2002.The open landscape institute(0LI) the society for the protection of nature in Israel(SPNI), Lerman, Sadan, svivot tichnun. ,various Internet sites (see reference list), and on two references containing the whole array of tools and means existing for the preservation of open space: a)Altman *Preservation of agricultural land aginst pressure imposed by urbane development needs – can we learn from other countries experience?* – urbane and district research center, Technion, Haifa,Israel 1998 b) Aan , *Land property rights and the ability of open space preservation - in Israel* , urbane and district research center , Technion, Haifa,Israel.2001

Tools and means	Description of open spaces preservation Tool and its application	State	Effectiveness
Public acquisition			
Protecting open spaces by acquisition	Local inhabitants are paying 19$ annually acquisition fees to preserve "open spaces"	U.S.A	
Full public ownership	Full public control. Implementation: of"green strips" Development financed by local authorities purchase taxes and bonds.	U.S.A	Highly effective and integrated system of public acquisition and maintenance
"Land bank"	Full land control by public **Implementation:** government/municipality acquisition of land controls the pace and character of land destination and development	Holland	Limitation of annual budget
Preservation by municipal, district, and state planning.			
Planning authority hierarchy	Decisions of local authorities are subjected to higher authorities enabling centrally controlled planning **Implementation**: Centralizing authoritative control	Holland Britain Canada U.S.A	Highly effective, especially in agricultural land preservation
State and district plans.	Defining areas where development is not welcome, or totally forbidden	Holland U.S.A	Highly effective
Nation wide directives	Dictating policy to local authorities, while allowing them some flexibility **Implementation**: directives from higher authorities leave freedom of application to local authorities comply with centrally controlled directives	Britain Canada	In Britain, where other tools of control are in effect, success has been achieved. In Canada, the freedom left to localities impairs effectiveness.
Means for directing development			
Urban expanse limits	Formation of boundaries around towns to prevent expansion and urban sprawl **Implementation**: States are setting urban and rural boundaries.	U.S.A	Control of urban expanse is successful, but its drawback lies in development jumps over forbidden area.
Preventing urban annexation	Preserving agricultural terrain by the prevention of urbane annexation Implication: Mean of planning rural –	U.S.A	Has attained success in the designation and preservation of agricultural areas..

Table 4.2: *Preservation tools relevant to urbane vicinity open spaces*

The tools described above ensure the public preservation of open spaces and defend their optional use. Since most of the tools are legislative, they are mainly operated by authorities. Most failures of the system originate from authorities who are unaware of the important role played by these open spaces. Such negligence weakens the ability of the authorities to stand against economic pressures which would erode the protective shield of the open spaces.

We can thus conclude that:

1. Implementation of the "ideological norm" in guarding open spaces will be possible only if the cultural and environmental values of the open spaces are recognized and appreciated
2. Even the open spaces preservation tools associated with the "ideological" approach should be supported by economical tools in order to ensure the political efficacy of preservation, as well as to incorporate many elements of the population in the preservation process.

4.4. Strategies and concepts for open area planning.

"Underlying every urbanizing environment that has developed an image of increasing sameness are unique natural or cultural attributes waiting to be revealed. There are always elements of the original landscape that remain' sometimes deeply buried beneath the new."(Hough) [107]

Throughout, this work has described both the chain of events that threaten to annihilate open spaces as well as the "right track" that will spare open spaces.

The last critical stage of this track is the designer's planning board. At this stage, the designer formulates the final landscape product, a product which sums up all of the legislation, definitions, commissions, etc., that are aimed at the preservation of open spaces.

The burden of translating **development** into landscape planning, as well as guarding the ecological surroundings from overdevelopment, lies upon planner's shoulders.

It is the planner's responsibility to rehabilitate heritage sites and to expose latent landscape values. Both aims should be harmonized with modern human life necessities.

This chapter will review the methods, tools and concepts available to the planner for making his critical decisions.

In "Discovering the Vernacular Landscape,"[108] Jackson mentions three possible approaches for improving human relations with the natural environment:

1. **The instrumental approach**, which strives to protect nature for the recreational purposes and aesthetic experiences that cannot be realized in urban surroundings.
2. **The ecological approach**, which seeks to promote human well being over a long stretch of time by preventing irreversible environmental changes.
3. **The symbolic approach**, which is expressed by the mystic connection to the land that is achieved by living close to it.

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[107] ***Hough Michael***, out of the place, restoring identify to the regional landscape,*Yale University Press ,New Haven &London 1990.p.1-5*

[108] Jackson, J. *Discovering the vernacular landscape,* New Haven: Yale University Press, , 1984.

The planner's aspiration is to synthesize, or at least address, all three approaches in order to minimize the risk of misusing the specific "last landscape" on their planning table. He strives to find his own vernacular, and to reveal in the planned area a semblance of known places.

In his book "Out of Place," Michael Hough writes:

A historical perspective suggests that the differences between one place and another have arisen, not from efforts to create long-range visions and grand designs, but from vernacular responses to the practical problems of every day life.[109]

Indeed, it can be argued that purposeful design has done more to generate a sense of "placelessness" than to promote a sense of place. The new forces shaping the landscape are no longer small and local in scope but are great in both scale and consequence.

As previously mentioned, the technological and economic impact of these forces on the environment has never before had such profound potential for the destruction of life systems. Contemporary design, concerned with "solving problems," has not traditionally focused on an agenda of creating vernacular places. Creating a sense of place requires a conscious decision to do so. At the same time, the need to invest in the protection of nature has never been so urgent.

I would like to review four main factors that affect the exposure of landscape identity as a basis for landscape planning, and for integrating and composing elements of preservation and development into a common picture. These include "knowing the place"; "maintaining history";" environmental learning"; and "sustainability.

[109] Hough, *out of...*,(1990).

4.4.1 Knowing the place[110]:

At the turn of the century, Patrick Geddes taught that before one attempts to change a place, one must discover its essential character in order to understand its patterns of movement, social dynamics, history and traditions—factors which influence its environmental possibilities.

> In his design studies for Madura during the Madras Presidency, Geddes writes:
> *One of the poor quarters... is at present threatened with "relief from congestion," and we are shown a rough plan in which the usual gridiron of new thoroughfares is hacked through its old-world village life... the sanitary improvements begin by destroying an excellent house for the sole purpose of inclining the present lane from the position slightly oblique to the edge of the drawing board to one strictly parallel to it...* [111]

In effect, Geddes argues that modifications of city plans (as well as modifications to any landscape) are the result of thought processes that begin on paper, and are not based on the environmental and social realities of the location.

The question that must be asked before learning about a place or landscape is: What qualities does the landscape possess that makes it unique? This question has to do with two fundamental criteria.

- First: The natural attributes of the region or locality.
- Second: Social processes—those attributes that the landscape's inhabitants have added to it. The social aspect deals with the ways in which people adapt to their living environment and change it to suit their way of life. How do they make it their own? In effect, regional identity is the collective reaction of people to their environment over time.[112]

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[110] *Hough Michael, op.cit,*

[111] Boardman, Philip. *The worlds of Patrick Geddes.* London: Routledge and K. Paul , 1978.

[112] Hough, *out of...*,(1990).

4.4.2 Heritage Landscape: Maintaining a sense of history.

Rarely does the designer have the luxury to create a place from nothing. Something is always there before he begins: a piece of history, a peculiar character, and a process of change. The protection of natural and cultural history lies at the heart of maintaining a continual link with a location's identity and past. The designer must reuse and integrate the old into the new while avoiding the temptation to turn the landscape into a museum, merely because it is old and has a history.

Our overwhelming desire to eliminate the past is most evident in the destruction of nature that is prevalent in all areas of the world. In the environmental aspect, reference to the past (both in rural and urban landscapes) is mostly associated with "heritage landscapes."

"Heritage" implies an entire set of symbols and metaphors that reflect the lifestyle and aspirations of a social group that share ideals, worldviews, and cultural heritages that are similar, if not uniform.[113] Landscape images are engraved in our cognitive processes and memories, which associates a certain district with its history, and characterizes the district by its past. Landscapes thus become part and parcel of each human being's cultural heritage.

The aggregate of mankind's personal perception of "heritage landscapes" are the open spaces which form an important set of cultural values that constitute human society. "Heritage landscape" is the scenic-geographical expression of: historical narratives, cultural metaphors, and utopian dreams. The denial of urban settlements in the Zionistic ethos had initially removed any aspirations for urban landscapes. Only recently has nostalgia developed towards the quarters and sites of towns and cities. The attitude results in the perception that each unit of the country's open spaces has characteristics that make preservation worthwhile. These open spaces form a network of landscapes that shape the

[113] Lerman Architects, Sadan, svivot tichnun. *Policy and tool for the preservation of open spaces, background for policy definition.* preliminary report no 1, The open landscape institute(0LI) the society for the protection of nature in Israel(SPNI), April 2002. (Hebrew)

country's image. Since the country's landscapes form part of its heritage, cherishing the landscape allows each area to "tell" its own expressible and human story. The users and viewers of a particular area can thus read the story of the country via its landscape.

In order to guard open spaces and their narratives, directives must be issued which document the final effects of planning on a particular area in the preliminary planning process.

4.4.3 Environmental learning

" Today it is nature beleaguered in the country, too scarce in the city which has become precious" McHarg[114]

It is fairly easy to comprehend how this mental dissociation occurs. Perceptually, we miss the obvious evidence of natural surroundings, such as the forest, streams, marshes and fields. Yet, we fail to see nature as an integrated and connected system that operates in one way or another regardless of locality, whether this is in the country or within the city itself.[115] As we approach the twenty-first century, the environmental concerns that originated during the 1960s have resulted in an acute awareness of the earth's fragility as a natural system. We have begun to understand human beings as biological creatures that are immersed in vital ecological relationships with the biosphere. Humankind must live within the limits of the ecosystem, and share the planet with non-human life.[116]

These perceptions have lead to the understanding that a radical shift in values must occur. We must engage in a transition from a society which is preoccupied with consumerism and exploitation to one which prioritizes a more sustainable future. Environmental literacy lies at the heart of recognizing places with which we are familiar, and is thus focused on issues of identity. It is necessary for people who live in or use urban areas, or places of any kind, to know the environment around them.

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[114] Mcharg,I.L *Design With Nature,* New York: John Wiley and Sons. Inc.1992
[115] Hough, Michael. *Cities and Natural Process,* London and New York:routledge, 1995. 6-31
[116] Jellicoe, Geoffrey and Susan. *The Landscape of man, shaping the environment from prehistory to the present day* , London:Thames&Hudson Ltd, 1995. 287-398.

McHarg, Lewis and others who are concerned with resolving nature and human habitats, have demonstrated that the processes which shape the landscape and the complexity of life forms evolved over time. These processes provide the indispensable basis for shaping human settlement. The interdependence of the earth's life processes (which affect the climate, water, plants, animals as well as the transformation and renewal of living and non-living materials) are the elements of a self-perpetuating biosphere that sustains life and forms the physical landscape.[117]

Education pertaining to a place's environmental or cultural significance changes our attitudes and the way we experience. For example, the public reaction to a highway "no-mow "experimental program in North Dakota was initially negative. In a survey of motorists, 82 percent of those interviewed said that if they had to make a choice, they preferred the mown plots to those that had been left un-mown. However, when they were informed that the un-mown plots provided waterfowl with habitats for nesting, many wished to change their answer. [118]

Endowing ordinary and unnoticed places (such as a suburban street, a section of prairie, or a forest landscape) with meaning and significance forms the basis of regional identity. The task of design is to encourage understanding and enjoyment of the landscape that comes from both emotional experience and scientific knowledge. In this way, landscapes which are normally overlooked can become memorable.

[117] Hough, *Cities* ...,(1995). 6-31

[118] Hough, Michael. *out of the place, restoring identify to the regional landscape*, ,New Haven &London: Yale University Press, 1990. 179-213.

4.4.4 Sustainability

About one hundred and fifty years ago, the English mathematician William Lloyd published a brochure entitled, "Two Lectures on Population Restrictions." Lloyd described a scenario in which each farmer in a village has a herd of cows. The herd grazes in the pasture, which is common to all of the villagers. If each farmer raises his herd, his income will increase and the additional expenses will be low. All of the farmers reach this logical conclusion and they all raise their herds. This leads to excess grazing, the pasture area grows and all of the farmers' income decreases.[119]

In due course, this phenomenon was nicknamed "the tragedy of the commons," a phenomenon wherein individual interest—though rational in its considerations—does not lead to the achievement of desired objectives but rather is detrimental to the individual and to the public at large [120].

If we are to define sustainability as "meeting the needs of the present without compromising the ability of future generations to meet theirs,"[121] there is the ultimate need for an ethic that recognizes the interdependence of all life forms and the maintenance of biological diversity. Sustainability, therefore, becomes everyone's concern. It is clear that the links between nature, cities and sustainability have profound implications for survival.

Sustainable landscapes are central to the regional imperative. Sustainability implies, among other things, the notion that human activity and technological systems can contribute to the well being of the environments and natural systems from which they draw benefit. This involves a fundamental acceptance of investment in the productivity and diversity of natural systems.

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[119] Hardin, G. "The Tragedy of the Commons." (After the work by William Lloyd, 1850) *Science*, 162 (1968):1243-1248.

[120] Kaplan, Moti. *The layout of open space*, Attach 1 from The Range of Option for the Future Spatial Organization of Israel: The Physical- Environmental Alternative. Israel 2020 Master Plan for Israel in the 21st century, Technion-Israel Institute of Technology,Faculty of Architecture and Town Planning, Samuel Neaman Institute for Advanced Studies in Science and Technology,1996. (Hebrew)

[121] Boardman, Philip. *The worlds of Patrick Geddes*. London: Routledge and K. Paul , 1978.

Conflicting points of view over the priorities of development versus the preservation of natural wealth have been the focus of discussion and argument for a very long time. The World Commission on Environment and Development, established by the United Nations in 1983, and whose report appears in 1987, has examined and proposed ways in which economic development initiatives and environmental conservation might be reconciled. For this to be workable, it would require the development of an environmental ethos far different from current attitudes and perceptions that see nature as "*resources for the benefit of mankind.*"[122] Such a notion would seem to be practically unattainable. The principle of investment in nature, where change and technological development are seen as positive forces that sustain and enhance the environment, must be the basis for an environmental design philosophy. Its principle of energy and nutrient flows, common to all ecosystems when applied to the design of the human environment, provide the only ethical and pragmatic alternative to the future health of the emerging regional landscape.

It should be concluded that strategies for open space planning form the landscape mesh which circles cities, dwells inside of them, and reflects passengers of a passing car. The result of these planned meshes will ideally provide a specific and unique quality to each individual place. In turn, this result will have an important effect on crowded urban compounds by forming their identities and reflecting their importance on the whole country. Our purpose as designers is to find, as J.B.Jackson described, "the sense of the place" as one of the ways in which we identify the peculiar characteristics of a landscape and its habitats.[123]

The questions that must be asked are: What makes up the sense of place? What human and nonhuman forces have, in the past, created distinctly identifiable landscapes? How are they shaping the postindustrial landscape today?

The search for a sense of place is an environmental view of design which recognizes the reality of contemporary scenes, draws its inspiration from the ecological and cultural

[122] Boardman, *The worlds...*,(1978).

[123] Jackson, J. *Discovering the vernacular landscape*, New Haven: Yale University Press, , 1984.

lessons of the vernacular, and emphasizes the need for a sustainable approach to the future. It is based on the conviction that, in the context of contemporary life, the sense of identity and place is a significant factor that shapes human environment.


Boundary
Green Belt
Intermediate Region
zone

CHAPTER V

Conclusion

..."I often felt as superfluous as the man in Bertolt Brecht's parable who painstakingly adorned the walls of his stateroom with beautiful murals while the ship was going down." Robert Fishman [124]

Israel's territory has undergone tremendous changes in its 55 years of existence; it's open landscapes eroded and shrunk. The fact that Israel is surrounded by closed and unfriendly borders makes the situation even worse, rendering the Israeli landscape smaller and even claustrophobic.

I have developed this study from the perspective of an Israeli landscape designer; having felt that we risk occupying ourselves with "wall decorations" while the whole ship is about to sink. This feeling compelled me to take a step back in order to obtain a better view of the complete picture—in order to assess the causes of the rapid loss of Israel's open spaces. I have examined the chain of events, history, evolution of planning, and socio-cultural effects which have led to this catastrophic situation in order to propose critical tools that might be able to stop the loss of open spaces in Israel.

As such, this work began by assessing diminishing open spaces from a macro viewpoint that which studied the national land plans that had evolved during Israel's short history. From this approach, a smaller scale viewpoint was addressed, which focused on designing principles for each open piece of land.

It can be conclude that three central elements, reviewed in this work, have caused the continuing disappearance of the open landscapes in Israel:

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[124] Fishman, Robert. Preface. *Urban utopias in the twentieth century.* Fishman. New York: Basic books, 1977. ix-xiv.

1. "National Planning" is based on the assumption that a common base can be developed that would integrate the many local systems into a coherent whole. We have shown in this review that Master Plans can be a two edged sword, on the one hand they can preserve open landscapes and on the other, they can annihilate them. The worst situation occurs when national plans are ignored for the following reasons:

1. In the absence of an alternative unified national level plan, local planners take the "liberty" of accommodating or favoring local interests without too much consideration of compliance with national interests.
2. In the face of fast changing events driven by changing local and geo- economical forces, periodically revised plans are essential in preventing chaotic local planning that contradicts the collective national interest.

2. Definitions and phrases with respect to open landscapes and spaces, found in the four national master plans reviewed above, are each aimed to guide local planners in bridging planning objectives and implementation. Yet, each master plan provides a new set of definitions for these terms.. This effects the conservation of open landscapes in Israel in two main ways:

1. The lack of clear terms and definitions of open landscapes, as in the Sharon plan, allowed vast, undefined open spaces to "fall victim" to urban expansion, a lesson learned in the later national plans of the nineties, where each peace of open space (What little are left) was identified and defined.
2. The clarity and phrasing of open landscape definitions is of utmost importance. Ambiguity, vagueness, and detachment, quickly leads to misinterpretation that has resulted in unanticipated losses of open landscape.

3. During the first three decades of Israel's existence, decisions concerning the destiny of open spaces were guided by a perceived need to disperse the population to non-inhibited areas rather than with an eye to the environmental outcome of development. Pressures on decision makers generated by residential demand and development entrepreneurs replaced the concept of "population dispersal", causing a further decline in open spaces reserves.

The lack of environmental awareness and concern poses a problem, not only at the national scale, but also for local municipalities were many of the local open spaces are poorly planned or ignored.

These, and other elements developed above, have led to me to propose three guiding principles for designing "last landscape" developed in the following chapter.

5.1 *Principle of transparency:*

Each design process must base itself on some background directive. The principles of state plans are critical stones corner upon which local design rests. If the successful preservation of landscape is to be achieved, local designers must arrange their designs in an orderly fashion by being both transparent and synergetic with other levels of planning. Design decisions that are detached from either the original principles set by the central planning process or from each other will inevitably lead to the annihilation of the remaining portions of the country's landscape.

Figure 5.1
Principle of transparency:
Local designers must arrange their designs in an orderly fashion by being both transparent and synergetic to other levels of planning.

The fact that the years in which uncontrolled local plans led to the disappearance of open spaces coincide with the three decade gap between Sharon's central planning and the national plans of the nineties proves this point. The shifting attitudes which formed a firm base for design principles took place in the early nineties. For the first time, local planners were equipped with adequate tools which allowed them to design and conserve the country's remaining open spaces.

The successful results of clear design regulations that were maintained through various stages and layers of planning are reflected in the case study of Ayalon Park. In the context of its surroundings, this site might as well have been considered a "last landscape." Yet, it was saved due to a designing process that was based on logical environmental directives.

It must be noted that no basic or comprehensive national planning frame "hovers in the air." Rather, planning must relate to environmental ,ecological conditions, and cultural conditions as well as the needs of inhabitants, so that the results of local land planning comply with main frame planning.

Maintaining transparency throughout various levels of planning is necessary if success in preservation is to be achieved by individual designers. If all the planning intentions are clear, a single bench or path in the smallest garden can reflect the physical and cultural base of its surrounding vicinity.

Transparency will enable creative planning that is at the same time synergetic with the local environment. It will enable heritage to be combined with a landscape's contemporary existence, and expose the cultural meanings that lie behind planning directives.

5.2 *principle of "meaning":*

As open spaces become scarcer, the definitions and names attributed to each piece of land increases. These verbal additions reveal the planner's desperate attempt to use words in order to cover up the catastrophe which the usual mapping process (via textures and colors) might not be able to conceal.

As mentioned in the conclusions to Chapter Two, those areas once defined as border areas ended up being town centers. These areas functioned in a different manner from the "green breathing lungs" which formed barriers preventing uncontrolled urban expansion that threatens to turn the country into one built-up continuum. Behind each phrase or definition given by a planner lies a verbal code.

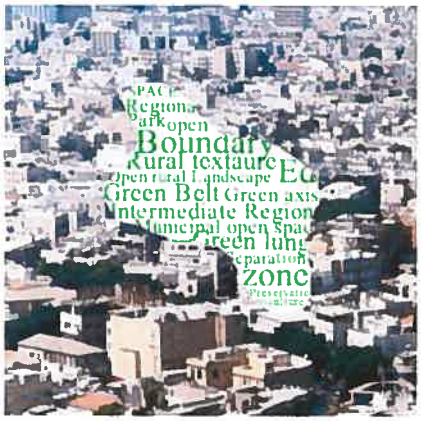

Figure 5.2
Principle of "meaning"
As open spaces become scarcer, the definitions and names attributed to each piece of land increases.
Grasping the right meaning of the definition attribution gets, thus, mission critical, by giving inspiration and right usage intention for the planner.

continuum. Behind each phrase or definition given by a planner lies a verbal code.

The verbal code conveys various associations and meanings to a potential designer, and communicates what has to be done with each area.

The following land destination names are examples demonstrating this principle:

- An "**Open rural landscape**" is meant to preserve landscapes of cultural and historic value, even if their recreation functions might be limited.
- A **"green belt"** and a **"green lung"** on the other hand would usually indicate an area that is to be developed with intensive recreation facilities.
- Areas defined as **"intermediate zones"** or **"boundaries"** are areas intended to contrast with adjacent urban areas.

And yet, all of these terms might be attributed to different parts of a single design zone.

At first glance, these multiple definitions might lead to the same or similar translations in design terms: namely, the same green grass, same trail, and the same playground. But when referred to the "meaning" of these terms, all the implied requirements can be put into practice by the designer in same area, and in the appropriate intended mixture of results and priorities.

In order to demonstrate this point, it is necessary to return to the Ayalon Project case study. Fig 31 shows the planned solution to this area unit. Throughout the years, many definitions have been attributed to the zone by the different national plans. It was first defined as a "preservation destined landscape," then as a "open rural landscape," a "green lung" and finally, as a "boundary." In the process of certification, planning authorities integrated all of the above definitions in order to obtain an optimal landscape image for the location. Thus, "Integrated Planning" was born as a method that integrates natural rural qualities with a supply of green parks.

Grasping the right meaning attributed to an open space provides the inspiration that leads to appropriate use and design.

Figure 5.3:
Shows the planned solution to Ayalon Park, planning authorities had integrated all to get the optimal resulted landscape image for the compounded landscape.

(Source: Plasner Architects, Gogenhaim-Bloch, Kaplan Moti. *Ayalon Park, TAMA 5.3- Regional Master Plan 5.3 ,report no 5*. Israel Ministry of interior, ministry of housing&construction, Israel land authority, may 1999.)

5.3 *Principle of environmental awareness*

The term "landscape" is not limited by size or scale. It can be a vast area of woods, rural land or a desert, and it can also be a small group of trees or a stretch of residential lawn. It is the landscape designer's responsibility to approach each piece of land as a defined "open area." Irrespective of its size, each unit of land must be approached as the last open space unit available. Such an approach will inevitably attach a deeper value to the land, as well as stress he designer's responsibility to prevent its misuse.

This kind of environmental awareness can be translated into the same four principles of planning discussed in Chapter Three. These are: " knowing the place," "maintaining history," "environmental learning" and "sustainability."

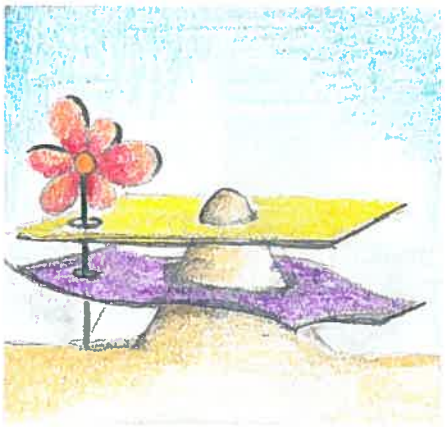

Figure 5.4 :
Principle of environmental awareness: Each unit of land must be approached as the last open space unit available. The principle of environmental awareness meant to act as basic tools by which a designer can achieve the correct cultural connection to land and landscape.

These principles are meant to act as basic tools by which a designer can achieve an appropriate cultural connection to land and landscape, and lead to the discovery of the "local values" hidden behind abstract textures and colors on planning maps, such as a small suburban garden. They are principles, which are common to planning at any scale, and they form a powerful basis for a methodology of design, which aims to preserve a local culture for years to come.

In order to understand the heavy responsibilities lying on the designer's shoulders, he must perceive that he has "the last landscape" on his hands. He must be aware that each small corner of a city garden, a planted field, or a playground, are the final outcomes of the many tools and means which drive the process of landscape preservation. He must also understand all of the implications of a landscape, such as its cultural value and impact on human quality of life.

In the introduction of this study, I raised the following questions pertaining to the land of Israel:What is it composed of and what is the extent of its stability? Can the illusion of space be created in an ever-shrinking area? To what degree are we as planners willing and able to have an impact? Which tools do we have at our disposal to try and preserve the utopia of the Israeli landscape, and to find its vernacular?

The three principles of designing discussed in this chapter, do not serve as the only ultimate solution to the complex problems of the Israeli landscape. Many factors are involved in the problem, such as: war and peace, diminishing land reserves, politics, and the economy. Rather, the three principals represent a starting point for the local planner, from which he can discover his personal contribution or influence. In *The Experience of the Place*, Tony Hiss states:

Consciously noticing what we're experiencing, once we get back the hang of it, can be a common denominator, a language of connectedness between social, environmental, and economic concerns... Using the things we know or sense about places, but seldom put into words, we can bring all of our minds to bear on the problems of how our communities, regions, and landscapes should change. We each have a contribution to make.[125]

[125] Hiss, Tony. Introduction. *The experience of place, a new way of looking at and dealing with our radically changing cities and countryside.* Hiss, New-York: Vitage bookes, 1991. xx.

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